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ABSTRACT

A review of current research and literature about women in higher education is presented in this monograph in the context of equality of opportunity. The following areas are addressed: the status of women students, institutional practices that affect the participation of women students, the socialization process, women's studies and women's colleges, women faculty and administrators, academic careers, legislation pertaining to the rights of women in higher education and current enforcement efforts, and recommendations for the future to achieve greater equality. The research indicates that there have been and continue to be powerful constraints affecting the participation of women; the status of women as students and employees is still not equal to that of men. Reasons for the discriminatory situation are documented and examined, although there are limitations in the information provided by available research. Recommendations consist of five steps that institutions, agencies, and organizations can take to increase the participation of women in higher education. A bibliography is included. (SW)

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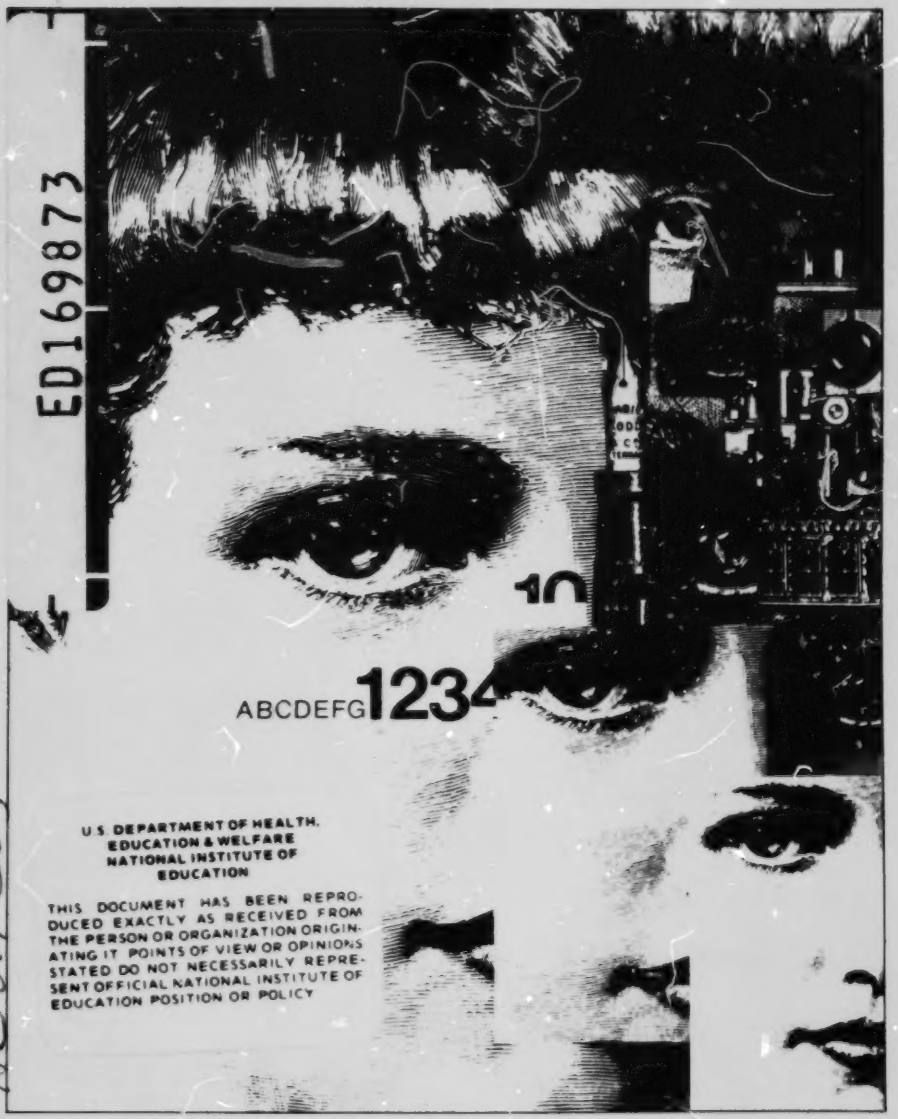
REPORT

Women in Academe: Steps to Greater Equality

Judith M. Gappa and Barbara S. Uehling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Women in Academe: Steps to Greater Equality

Judith M. Gappa and Barbara S. Uehling

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Foreword

There have been many studies and much written about the inequities facing women, especially in higher education. Much of this literature has concentrated on single issues. At the student level the focus has been on the imbalances in certain male/female-dominated degree programs and in athletics. At the professional level attention has been directed to faculty rank and salary differences and to the paucity of women as top administrators and trustees. Headlines such as "There are more women than men undergraduate students, yet women make up only 15 percent of voting members of college and university governing boards," make good copy. But they do not explain why these conditions exist. Nor do they explain how the structural and professional relationships in the academy contribute to these conditions.

Judith M. Gappa, senior staff associate at the National Center for Higher Education Management Systems (NCHEMS) and currently at Utah State University, and Barbara S. Uehling, board member of NCHEMS and chancellor at the University of Missouri, accomplish four major objectives in this comprehensive review of the publications and research concerning women in academe. First, they gather into a conceptual unit the literature concerning women in higher education. Second, they identify the relationships between this literature and the constituent parts and levels of the higher education enterprise. Third, they detail various causes of inequities for women in higher education and their effects. And finally, they develop recommendations to increase more equitable treatment of academic women. The result of their efforts is a research report that can be used by every level of the academy as it responds to the goal of achieving greater equality for women.

Jonathan D. Fife, Director
ERIC® Clearinghouse on Higher Education

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Overview

> All of us do not have equal talent, but all of us should have an equal opportunity to develop our talents.
>
> John F. Kennedy

This monograph presents a review of the current research and literature about women in higher education. The review is made in the context of a concept of equality. For the authors, equality for women means equality of opportunity. When equality of opportunity is achieved, women will not be constrained by early socialization experiences, social and economic factors, institutional policies and practices, or any factor other than ability from access to and full participation in the services, educational programs, and benefits of higher education. Constraints that do affect access and participation, such as individual ability, will be no greater for women than for men.

Review of the available research indicates that there have been and continue to be powerful constraints affecting the participation of women. Although progress is being made, the status of women as students and employees is still not equal to that of men. At the present time, women students, faculty, and administrators are concentrated in certain types of institutions, in the traditionally feminine disciplines and in particular administrative positions, at the lower levels of educational attainment as students, and at the lower ranks and salaries as faculty.

The research provides strong evidence that this discriminatory situation is the result of diverse influences related to each other in complex ways. First, the socialization of both men and women produces attitudes and stereotypes about women that affect their participation. Men's views of women's potential and appropriate roles affect both women students and faculty. So do women's low self-esteem and limited aspirations, which are inculcated long before the college years. Second, social and economic constraints affect both the access and retention of women. Socioeconomic class, parental educational and religious backgrounds, racial/ethnic group membership, places of residence, family attitudes, and domestic responsibilities all affect the participation of women in higher education. Research evidence and the informed opinions of well-known women point consistently to the need for changes in institutional policies and practices that would alleviate constraints placed on women, and that in the long run

would benefit men as well. Though much of the recent institutional self-examination has been motivated by a special concern for women and other minority groups, a questioning of traditions and practices ultimately can lead to a better academic environment for everyone.

A dominant theme of this monograph is the transition that women and institutions of higher education are undergoing in their efforts to secure equality of opportunity. Women are changing their lifestyles, their attitudes about themselves, and their goals and objectives. Many institutions, in response to new clientele, recent legislation, the results of self-examination, and other external and internal influences are changing their policies and practices to better accommodate a more diverse student and employee population.

While some progress toward equity has been made by women in higher education, more is needed. Legislation can provide a framework for the efforts of women and institutions to continue the process of beneficial change. The rights of women with regard to equal opportunity in employment and in federally assisted educational programs have been guaranteed by recent legislation. Perhaps the greatest contribution of this legislation will be a heightened consciousness about the rights and needs of women, leading to more collaborative efforts on the part of women and men within institutions, and less reliance on enforcement agencies and the courts.

Since this is a period of rapid transition for women in higher education, research results are quickly outdated. Data from 1969 through 1972, the only data available for parts of this monograph, are already somewhat obsolete. Other problems with the current status of the research include the lack of information about minority women, the lack of research on sufficiently large samples to have generalizable results, the general absence of research about the effect of institutional practices on women, and the little comparable information available with which to establish trends. Conflicts in the research results reported and weaknesses in the available information are pointed out in the monograph. To the extent possible, given the gaps in information, the reasons for the present lack of equality of opportunity for women are documented and examined. The monograph surveys information about women students and women faculty and administrators, reviews legislation pertaining to the rights of women in higher education, and looks at the current status of enforcement efforts. In the final section recommendations are made for steps that can be taken to provide greater equality for women in academe. The recommendations are intended to encourage administrators, faculty, staff, and students within institutions to examine the

need for change and to implement actions appropriate to their particular situation. The recommendations consist of five steps that institutions, agencies, and organizations can take to increase the participation of women in higher education. The first step is to expand the information base. Further research is needed at national, regional, state, and institutional levels. The second step is to provide incentives for change. Regardless of the amount of information available, little change will occur without appropriate incentives to institutions, departments, and individuals to make changes. With appropriate incentives, and information based upon research results and self-studies, (step three) barriers that impede or constrain women's participation in higher education can be eliminated and (step four) new institutional services provided. Finally (step five), it will take a continuous review of progress and additional efforts to improve the status of women in higher education. Administrators and educational leaders committed to long-term efforts and evaluation of results are essential.

A Time of Change

The participation of women as students in higher education is in a period of transition. Social attitudes about the value of educating women gradually have become more liberal over the past century until, now, equal opportunity for American women, both in education and in employment, is prescribed by law. These legally buttressed changes in attitude, working with economic and other influences, have accelerated the participation of women in higher education during the past decade. Women now constitute a highly diversified group of students, representing many attitudes, expectations, and aspirations. But both the letter and the spirit of the laws against sex discrimination are subject to varying interpretations and different approaches to implementation. There are pockets of resistance to equal treatment. The status of women is in transition toward equity but is not yet fully equitable.

The new legislation is but one factor affecting the status of women students. Women now have greater freedom to plan the number of children they will have. More and more women are choosing to combine career and family responsibilities. And most women are living longer. These changes in education, career, and lifestyle patterns have created at least three major categories of women students: traditional undergraduates, age 18 to 21, who enter college after graduation from high school; graduate students; and reentry women, who return to the educational system after leaving it for periods ranging from a few years to 20 or more. Patterns of enrollment and degree attainment for women are shifting rapidly, which complicates the study of women's participation in higher education. Many of the data are confused and many research questions need answering. Published research and information about women students is mostly based on data collected in the early seventies. They do not reflect, therefore, the changes that have occurred during the present decade, or the current status of women students. Further, the data frequently conflict, or do not differentiate between types of students. And much of the literature is adversarial, either attempting to prove or disprove that discrimination exists. Yet some generalizations can be drawn from the available research.

Historical Trends

In the best English tradition, colleges were established in the colonies during the seventeenth century to educate the sons of Anglo-Saxon landowners to the service of church and state. Women were considered intellectually and socially inferior to men and unfit for college-level schooling. Female learning was ridiculed or feared. It was generally believed that women's minds were not strong enough for learning and could easily become unbalanced; it was assumed, too, that if women learned to read and write, they would neglect household tasks and get into mischief (Newcomer 1959, p. 7). Instead, girls were taught the domestic skills considered necessary for housewives and mothers. It took American higher education two centuries to recognize the legitimacy of women's claims to an education similar to mens. Not until 1841, 205 years after Harvard opened its doors, did three women from Oberlin College receive baccalaureate degrees that were considered equivalent to those granted men (Newcomer 1959, p. 5).

By the mid-nineteenth century, attitudes and practices about the education of women were undergoing marked changes and for several reasons participation of women in higher education increased rapidly. Growing industrial production created a demand for women workers outside the home, thus undermining the popular belief that a woman's place was in the home. Public schooling began to spread across the nation, creating a need for teachers. By 1850, there were 2,000,000 school-age children requiring about 200,000 teachers, 90 percent of whom were women (Roby in Holmstrom 1973, p. 5). (The channeling of women into specific academic disciplines had its origins in the training of women to be teachers.) Decline in male enrollments during the Civil War left many colleges in desperate financial need, which encouraged them to open their doors to women. Western colleges and universities enrolled women because thinly populated states could not afford separate educational systems. Finally, financial donations specifically for women's education contributed to the increasing acceptance of women in coeducational institutions and the establishment of women's colleges. By the end of the century, many women's colleges were establishing programs identical to those of the more prestigious men's schools.

At the turn into the twentieth century, women received just under 20 percent of all master's degrees, and 8 percent of all doctoral degrees (U.S. Department of Labor 1969, pp. 6-7). The participation of women in higher education has continued to increase, but unsteadily. When economic needs have declined, women have quickly been dis-

couraged from enrolling and fulfilling degree requirements (Roby in Holmstrom 1973, p. 9). Between 1900 and 1930, the rate of increase in degrees awarded to women was greater than for men; this was reversed from 1930 to 1969. During the Second World War, the proportion of degrees awarded to women rose to about 40 percent. As returning GIs crowded the colleges, however, the proportion of degrees awarded to women declined to 24 percent (Holmstrom 1973, p. 9). In very recent years, there has been a rapid increase in the percentage of degrees awarded to women, by 1976 reaching an all-time high of 46 percent of bachelor's degrees, 46 percent of master's degrees, and 23 percent of doctorates (*Chronicle of Higher Education*, October 11, 1977, p. 10).

The Decision to Attend College

A major influence on potential college students is the information provided to them. This information comes from counselors, teachers, parents, and peers; from test scores that purport to measure interests and aptitudes; and from publications such as occupational guides and college catalogs.

Astin found that 83 percent of black men whose fathers had a college education were satisfied with the counseling they received in high school. Sixty-one percent of white men also reported being satisfied with counseling. However, only 54 percent of white women and 41 percent of black women gave high ratings to the counseling services. The reasons that women were less satisfied than men were not determined (Astin 1976a, p. 128). Scores on interest inventories and aptitude tests are often used by guidance counselors in advising students about whether to attend college. Many researchers believe the current interest inventories are sex biased. Tanney (1975) and Tittle (1974) point out that test developers have constructed inventories that limit the occupational choices that women can make (cited in Astin 1976a, pp. 129-30). Birk (1974) found that the manuals accompanying these tests used in their administration and interpretation are sources of race and sex bias. An example is this excerpt from the *Strong Vocational Interest Blank (SVIB)* manual:

> Many young women do not have strong occupational interests, and they may score high only in certain 'premarital' occupations. . . . In such cases, the selection of an area of training or an occupation should probably be based on practical considerations — fields that can be pursued part-time, are easily resumed after periods of unemployment, and are readily available in different locales . . . (quoted in Astin 1976a, p. 130).

Analysis of career-guidance materials such as the *Occupational*

Outlook Handbook or the *Encyclopedia of Careers and Vocational Guidance* has revealed similar stereotyped approaches to careers for women. For example, pictures of men predominated in all occupational categories except clerical and sales, where 54 percent of all the illustrations were of women. The potential effect of these materials is vast: over 80,000 copies of the 1972-73 *Occupational Outlook Handbook* were distributed to high school, college, and other educational guidance centers (Astin 1976a, pp. 131-32). Analysis of a random sample of catalogs from all types of collegiate institutions showed that the catalogs devoted far more space to men than to women in text and illustrations. The catalogs distributed by four-year colleges and universities were the prime offenders (Astin 1976a, pp. 135-39).

While aptitude and past achievement are important variables in predicting college success and achievement, socioeconomic status also exerts a strong influence. Women from families of high socioeconomic status are about as likely as their male counterparts to attend college. Women from a lower socioeconomic background are less likely than men to attend. Forty percent of high-ability females from the lowest socioeconomic quartile fail to enter college, as compared with 25 percent of the high-ability males. Komarovsky found that white, native-born, Anglo-Saxon, Protestant blue-collar workers and their wives valued college education for their sons, but regarded it as a "dispensable luxury" for their daughters (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, pp. 39-40). Other factors affecting women's decisions to go to college are the educational levels and values of parents, the willingness of parents to provide financial support, and the availability of institutions close to home (Astin 1976a, p. 17).

White ethnic and most racial-minority women generally are less apt to pursue postsecondary education than are other women. Since data on white ethnic women are sparse, researchers have primarily studied differences among racial groups. In the fall of 1974, 86 percent of freshmen women described themselves as Caucasian, 11 percent as black, 1 percent as American Indian, 1 percent as Oriental, and 2 percent as Mexican American/Chicano (Astin 1976a, p. 63). Black women tend to have the highest educational and career aspirations. In a study by the Survey Research Services, 41 percent of black male students and 59 percent of black female students graduating from high school in 1971 said they intended to go to college (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 43).

Expectations, Aspirations, and Characteristics

A 1977 national survey of attitudes of freshmen indicated the influence of the women's movement on women students and the transitional nature of their attitudes. First-year women indicated a substantial increase since 1966 in interest in traditionally masculine careers in business, engineering, law, and medicine; interest in the traditionally feminine career of teaching has greatly diminished. The number of first-year women considering some type of graduate degree reached 45.6 percent in 1977, as compared to 29.3 percent in 1971. Also disappearing are traditional views of women's roles. Only 19.8 percent of first-year women surveyed felt that married women should confine their activities to home and family in 1977 (Cooperative Institutional Research Program 1977, p. 41); in 1971, 30.6 percent had felt that they should (American Council on Education 1971, p. 35). The contrast between the attitudes expressed in 1971 and 1977 is shown in Table 1.

In a survey of the lifestyle preferences of junior and senior women at one institution, Mash (1978) found a similar trend toward simultaneous pursuit of career and family roles. Those who indicated a change in orientation from that of their beginning year attributed the change to interest in applying their fields of study, peer influence, perceived changes in societal expectations for women, female faculty role models, and desire for increased earning power (Mash 1978, pp. 73-76). Thus the 1977 and 1978 studies reveal an essential similarity in the attitudes and expectations of undergraduate women, whether first-year or upperclass students. Among some graduate and reentry women students, however, attitudes and expectations are quite different from those of undergraduates. This change in orientation may be due to greater experience with the realities of trying to combine family obligations and either study or a career. In Astin's study, 25 percent of the women as compared with 15 percent of the men said that family obligations were a serious obstacle to graduate school completion, more so than financial problems. Women were also more likely to interrupt their graduate studies because of family responsibilities (Astin 1976a, pp. 207-8). Moreover, fewer women than men graduate students are married (Solmon 1976, p. 21). Feldman found that married women were more likely to attend graduate school from intellectual motivation, while single and divorced women more frequently cited financial motivation. Divorced women and married men were the most likely to remain in graduate school. Marriage reduced the conflicts for married men, but it increased the conflicts for married women. Feldman's data indicate that some women

Table 1. Weighted National Norms for Freshman Women on Selected Issues

	Percent of Response 1971	Percent of Response 1977
I. Reasons Noted as Important in Deciding on College		
1. Better job	70.1	77.2
2. Learn more about things	73.9	83.6
3. Prepare for graduate school	29.3	45.6
II. Chances Are Very Good that Student will		
1. Graduate with honors	4.1	10.1
2. Find a job in preferred field	Not Asked	68.4
3. Marry within a year after college	22.2	17.2
III. Objectives Considered to be Essential or Very Important		
1. Be authority in field	54.3	72.1
2. Obtain recognition from colleagues	31.6	44.9
3. Be very well off financially	28.2	50.7
4. Be successful in my own business	28.6	38.6
5. Raise a family	64.7	58.9
6. Have administrative responsibility	13.2	30.9

Sources: American Council on Education, *The American Freshman: National Norms for Fall 1971*, ACE Research Reports, vol. 6, no. 6 (Washington, D.C.: American Council on Education, 1971), pp. 35-7; and

Cooperative Institutional Research Program, *The American Freshman: National Norms for Fall 1977* (Los Angeles: University of California, Cooperative Institutional Research Program, Graduate School of Education, 1977), pp. 34-5.

who attempt to combine two full-time roles encounter problems. Some abandon one of the roles, either through divorce or through a deemphasis on the student role by attending part-time (Feldman 1974, pp. 130-36). However, since about 75 percent of the married women Ph.D.'s in Astin's sample were married before completing graduate training, Astin concluded that some women can successfully combine both roles. Such women have fewer children and have them later in life than do women in the general population (Solmon 1976, p. 21). The conflicting results from the Feldman and Astin studies indicate a need for further research.

The Reentry Woman

Women who have been out of the educational system for several years or more are appearing in colleges in ever-increasing numbers (Tittle and Denker 1977, p. 532). Astin's study of women in continuing education programs shows that the "typical" participant is a 36-year-old, middle-class white woman with several school-age children, although there was considerable diversity in age and background in her sample of 649 students and 541 alumnae. Women decide to resume their education because of career goals, or for personal enrichment, or to complete degrees. Mostly, they are serious, determined, and pragmatic about their goals, with definite plans to get degrees or certificates and to pursue careers (Astin 1976b, pp. 60, 126). Sixty-three percent of the 25-to-34 age group, and 80 percent of the over-35 group attended part time, as compared with 17 percent of the 18-to-24-year-olds (Tittle and Denker 1977, p. 532). The most popular fields of study are the social sciences, arts and humanities, and education. Reasons given for choice of these fields include: interest, suitability to the individual's personality and abilities, job opportunities, and prior job or educational experience (Astin 1976b, p. 63).

Nowhere is the present transitional character of the aims and view of women students more evident than in the self-concepts and attitudes of the continuing-education women in Astin's study. Forty-three percent of the women under 30 felt it was appropriate for mothers of preschool children to engage in activities outside the home, while only 13 percent of the women over 50 felt that way. Two-thirds of the women under 30 attached great importance to a career, as compared to only 37 percent of the women over 40. The indication seems to be that younger women have grown up in a society more favorable towards careers for women and less insistent about traditional marriages and large families (Astin 1976b, pp. 74-75).

Important for their goals for educational attainment, and perhaps a reflection of very recent changing attitudes on the part of women students generally, were the positive self-concepts expressed by continuing-education women in Astin's study. At least two-thirds rated themselves as above average or in the top 10 percent in effectiveness on the job, independence, academic ability, physical appearance, and drive to achieve. On only four traits did the respondents rate themselves as no better than average: mathematical, athletic, public-speaking, and artistic ability. Generally, these women see themselves as competent and successful in several spheres: work, academic, and the home. Three-fourths reported that they had happy marriages and that having a career in addition to being a wife and mother was

important to their sense of self-fulfillment (Astin 1976b, pp. 72-76). Astin's findings appear to confirm a transition to larger expectations and aspirations among all women students, from the entering freshman to the older reentry woman who has grappled with the problems of combining career and family. Exceptions to this generalization can be seen in the pressures felt by graduate student women (possibly because they find it more difficult to pursue part-time study) and among older women, who generally hold more traditional beliefs. In interpreting Astin's data, it should be remembered that they were derived from a sample of highly motivated women who elected to return to the educational system. They are not representative of women at large.

Enrollment

Enrollment of women in colleges and universities has increased sharply in the past several years. Women accounted for 93 percent of enrollment growth in 1977-78. College women now outnumber college men in the 18-to-19-year-old population (*Chronicle of Higher Education*, January 9, 1978, p. 1). The greatest proportional increase in enrollment is among reentry women, age 25 and older; their enrollment doubled between 1970 and 1974 (Tittle and Denker 1977, p. 532). In the graduate and professional schools, enrollment increased 75 percent for women between 1970 and 1975, but only 23 percent for men. As a consequence, women came to represent nearly 50 percent of the graduate and professional school students in the first year of the program. However, their proportion dropped to 33 percent for the second, third, and fourth years of training (*Chronicle of Higher Education*, February 7, 1977, p. 1).

Enrollment by Type of Institution — According to the Higher Education General Institutional Surveys for 1972 and 1973, women students are concentrated in the smaller, less selective, and less affluent institutions, where median faculty salaries are relatively low. Astin's analysis of the distribution of women students among various types of institutions shows that it parallels the distribution of women faculty. The highest concentration of women faculty and students occurs in the smaller institutions. Women students are 51 percent and women faculty are 39 percent of institutions enrolling up to 500 students. Their proportional representation drops steadily as size increases. In institutions enrolling 20,000 or more, women constitute 40 percent of the students and 19 percent of the faculty (Astin 1976a, p. 64). When selectivity of admissions according to ACT mean scores is considered, women students and faculty are

clustered together in institutions with low-through-medium selectivity. In these institutions, the proportion of women students ranges from 43 through 57.3 percent, and the proportion of women faculty ranges from 26 to 44 percent. However, in the most highly selective institutions, women constitute 24 to 30 percent of the students and 7 to 18 percent of the faculty (Astin 1976a, p. 65). Surprisingly, the percent of minority women in every racial category increases with the selectivity of the institution, perhaps indicating greater recruiting efforts (Brown and Stent 1977, p. 36). The same trend is true with regard to institutional affluence. The highest proportion of women students and faculty is found in institutions spending the least amount of money per student (Astin 1976a, p. 67). This relationship between women students and faculty and institutional affluence is reaffirmed when faculty salary levels are considered. Women account for 50 percent of the students and are 40 percent of the faculty at institutions with average salaries ranging from $9,000 to $11,000. However, women are 34 percent and 19 percent, respectively, at institutions with average salary ranges between $21,000 and $22,000 (Astin 1976a, p. 69).

The concentration of women students and women faculty in certain types of institutions raises questions. Do the elite institutions have policies and practices that operate to exclude women? Are women discouraged from attending these institutions by parents, teachers, counselors, or friends? Do they not attend because of lack of money? Do women lack confidence in their ability to succeed in highly selective institutions and thus fail to apply? Do women choose to attend institutions that offer relatively more faculty women as role models? Further research is needed to answer these questions.

Enrollment by Field — Just as the selection of a particular program in high school limits a student's options regarding college or university choice, so a student's choice of college major influences later career and graduate study opportunities. Women students frequently make decisions based on their perceptions of which fields are masculine and which are feminine. On that basis, for example, women have long tended to enter nursing and teaching rather than law or engineering (Epstein 1970, p. 155).

In recent years however, undergraduate women have slowly begun to increase their enrollment in fields that traditionally have not been considered feminine. Between 1970 and 1974, the popularity of fields such as education, English, humanities, and fine arts declined somewhat among undergraduate women, while the nontraditional

fields of business, biological sciences, agriculture, and other technical and nontechnical fields grew in popularity. Examination of the *American Freshmen: National Norms for Fall 1975* showed more young women planning to pursue traditionally male careers than ever before. Seventeen percent of women were planning careers in business, engineering, law, or medicine, an 11 percent increase since 1966 (Astin, King, and Richardson 1975, cited in Astin 1976a, p. 49). But, despite this new willingness on the part of women to consider more options than in the past, the traditional fields of education, non-M.D. health, and social sciences remained the most popular choices of women (Astin 1976a, p. 32). Women enrolling in traditionally male fields, according to Holmstrom's (1973) study, tend to be bright and assertive, have high aspirations, and come from middle-income families with well-educated parents. Black women tend to choose more nontraditional majors and careers. Twice as many black women as women in general aspired to be businesswomen, lawyers, and physicians (Astin 1976a, pp. 33-38). In contrast, the Montal Supportive Service Surveys showed that a majority of Chicanas 18 to 21 years of age majored in education, secretarial studies, and art, reflecting a more traditional outlook (Sanchez 1973, p. 29).

In their study of reentry women, Tittle and Denker found that the most frequent occupational goals were nursing, teaching, business, psychology, and counseling (1977, p. 533). Older women tend to be more practical, less undecided, and more in touch with the realities of the job market than their younger counterparts. They are less likely to name as career choices that of teacher where supply exceeds demand; or doctor or lawyer, for which extensive preparation is necessary; or artist, which requires exceptional talent; or engineer or farmer, occupations heavily dominated by men (Astin 1976a, p. 35).

The enrollment of women in professional schools of medicine and law has increased markedly over the past few years. Women represented 16.8 percent of all first-year medical students in 1972-3, as compared to 9 percent in 1968-9. (This may be due to federal incentives to increase enrollments in medical schools generally). Enrollment of women in law schools reached 16 percent in 1973, a gain of 35.2 percent in the space of only one year (Oltman 1974, pp. 8-9).

Among graduate students, stereotyped perception of the masculinity or femininity of a discipline is strongly related to the percentage of female participants within the discipline. For example, women are the majority of graduate students in only ten fields: German, Spanish, art, social work, English, French, library science, elementary education, nursing, and home economics. As fields move from being

perceived as masculine (electrical engineering, agriculture, and forestry, physics, and business) to being perceived as feminine (nursing, teaching, fine arts, English, home economics), there is a steady increase in the percentage of women enrolled (Feldman 1974, pp. 43-44).

Factors Affecting the Enrollment of Women in Specific Fields — Mathematics preparation is important for entrance into many traditionally masculine disciplines. Several studies have confirmed the mathematics requirement as one factor determining the distribution of women students among disciplines. A study of Berkeley students showed that inadequate preparation in mathematics in high school presented a serious constraint in choice of undergraduate major. Among the applicants for admission, 36 percent of the girls and 7 percent of the boys had had only two years of mathematics, whereas 57 percent of the boys as compared to 8 percent of the girls had had four years of mathematics (Sells 1973, p. 45). Hedges and Majer found a significant negative correlation between the number of women majors and the number of mathematics courses required in various disciplines. Negative correlations were also found for black and Chicano women (1976, pp. 4-5).

Another important factor in the movement of women students from traditional to nontraditional fields is active recruitment. In a study of 42 schools of engineering, Sproule and Mathis (1976) found that successful recruiting techniques make a difference. Recruiting techniques used to encourage women included the appointment of a person or committee committed to and responsible for recruiting women; brochures written to appeal to women students; television announcements, films, and personal responses to inquiries from women; the use of female engineering students to recruit in high schools; outreach devices aimed particularly at high school counselors; orientation programs; individual advisors (preferably women) for all women students enrolling in engineering; particiption in the Society of Women Engineers to provide increased contact with women engineers in the field; hiring of women faculty and use of women professionals as guest speakers to provide role models; and appropriate recognition of outstanding women students (1976, pp. 745-48). The percentage of women students awarded engineering degrees has increased from .3 in 1961 to 2.3 in 1975 at the bachelor's and master's levels, and from .9 to 1.1 at the doctoral level, indicating the success of these techniques. Similar success has occurred at the dental school at the University of California in Los Angeles, where by the fall of 1974 women constituted 20.8 percent of enrollment. UCLA gave tours of its

dentistry facilities for young women at all educational levels and invited counselors to lunch meetings and programs especially designed for them. A slide tape series was developed that depicted women progressing through dental school and into practice, while simultaneously exploring other dimensions of life such as dating, marriage during school, motherhood, and part-time work possibilities (Nyre and Xhonga 1975, pp. 37-41).

However, it appears that the admission of women to graduate programs has not typically been fostered by graduate-school catalogs in the past. An analysis of 213 1973-74 catalogs from doctoral-granting institutions indicated that 63 percent of the catalogs did not include a civil-rights compliance statement, use the words "men and women" to describe the student body, or use the term "coeducational" to describe the institution (Solmon 1976, pp. 111-12). Solmon concludes that an institution that is not careful to take sexism out of its catalogs is probably unaware of other factors that discriminate against or discourage potential women applicants.

Degree Attainment

While the increase in the number of women receiving bachelor's degrees has been slow and steady, the increase in the percentage of women earning doctorates and first professional degrees has been dramatic. The number of women earning doctorates grew by 59 percent between 1970 and 1975, while the number of men receiving doctorates declined by 2.6 percent. The increase in the percentage of first professional degrees awarded to women was even more spectacular, jumping 184 percent in the same five-year period, compared to a 37.4 percent increase for men. Nonetheless, women still receive a small percentage of the total doctorates (23 percent in 1976) and professional degrees (12.5 percent) awarded (U.S. DHEW, National Center for Education Statistics, 1978a, p. 15).

Among minority groups, black women received 57 percent of the bachelor's degrees awarded their race in 1973-74. However, for all other racial groups, including Caucasian, women received fewer degrees. Only about one-third of the total degrees awarded American Indians go to women. At present there is no information available about minority women who have received master's degrees (National Board of Graduate Education 1976, p. 63). However, such data have just begun to be collected for selected fields by the Higher Education General Information Surveys.

Analysis of women doctoral recipients by ethnic group indicates that black women have the highest proportion of doctorates received

by members of their race. The total number of minority women receiving doctorates remains very low.

Table 2. Number and Percentage of Doctoral Recipients by Sex and Race/Ethnic Group Awarded in the United States to United States Citizens, 1973

Racial/Ethnic Group	Men		Women	
	Number	Percent	Number	Percent
White	21,384	81	5,016	19
Black	562	74	198	26
Asian	259	81	61	19
Spanish	187	82	41	18
American Indian	115	78	33	22
Total	22,573	81	5,295	19

Sources:

Minority Groups: Among Doctorate Level Scientists, Engineers, and Scholars, 1973, cited by Carnegie Council on Policy Studies in Higher Education, *Making Affirmative Action Work in Higher Education* (San Francisco: Jossey-Bass, 1975), p. 199; and

Minority Group Participation in Graduate Education, cited by Carnegie Council on Policy Studies in Higher Educaiton, *Making Affirmative Action Work in Higher Education* (San Francisco: Jossey-Bass, 1975), p. 36.

Table 3 shows the total number of bachelor's, master's, and doctoral degrees earned by women for various fields of study in 1971 and 1976, and the women's percentage of total degrees awarded. The data show that women are moving into nontraditional disciplines at all levels. Yet the preponderance of degrees awarded to women remains in traditionally female fields. For example, women received more than half of the bachelor's degrees awarded in education, fine arts, foreign languages, health, home economics, library sciences, and psychology in 1976, just as they did in 1971.

Many of today's women college students may be risking unemployment in future years, or having to take jobs in occupations unrelated to their academic majors, by pursuing traditionally female areas of study. Education and library-science majors face a tight labor market. Few employment possibilities exist in foreign languages and fine arts. Only in the health fields and home economics are job prospects at all favorable (Astin 1976a, p. 36). Furthermore, by 1980, if present enrollment patterns continue, women will have difficulty finding employment in technical, professional, or managerial occupations unless they also possess saleable skills in accounting, computer

Table 3. Number and Percentage of Degrees Awarded to Women in Selected Disciplines 1970-71 and 1975-76

DISCIPLINE	1970-71 Bachelor's Number	1970-71 Bachelor's Percent	1970-71 Master's Number	1970-71 Master's Percent	1970-71 Doctorate Number	1970-71 Doctorate Percent	1975-76 Bachelor's Number	1975-76 Bachelor's Percent	1975-76 Master's Number	1975-76 Master's Percent	1975-76 Doctorate Number	1975-76 Doctorate Percent
Agriculture	539	4	144	6	31	3	3,570	18	478	14	61	7
Architecture	667	12	243	14	3	8	1,757	19	670	21	13	16
Area Studies	1,322	53	397	39	26	17	1,726	55	428	46	58	31
Biological Sciences	10,571	29	1,943	34	595	16	19,119	35	2,103	32	731	22
Business	10,803	9	1,045	4	23	3	28,783	20	4,974	12	52	5
Communications	3,813	35	642	35	19	13	8,824	41	1,308	42	50	25
Computer and I.S.	324	14	161	10	3	2	1,124	20	377	14	23	9
Education	132,236	74	50,020	56	1,355	21	114,026	73	82,591	64	2,563	33
Engineering	403	.8	185	1	23	.6	1,482	3	582	4	60	2
Fine Arts	18,169	60	3,165	47	138	22	25,799	61	4,313	52	173	28
Foreign Languages	15,285	75	3,126	65	297	38	11,902	76	2,362	68	414	48
Health Professions	19,680	77	3,272	55	77	17	42,824	79	8,441	66	166	28
Home Economics	10,970	97	1,365	94	75	61	16,803	96	2,001	91	127	71
Law	27	5	46	5	0	0	100	19	173	12	3	4
Letters	44,782	61	7,328	58	567	23	29,759	60	6,626	42	896	35
Library Science	932	92	5,713	81	11	28	785	93	6,331	78	32	45
Mathematics	9,494	38	1,524	29	93	8	6,554	41	1,313	34	94	11
Physical Sciences	3,014	14	853	13	246	6	4,139	19	825	15	300	9
Psychology	17,037	45	1,651	37	427	24	27,376	54	3,671	47	819	32
Social Services	57,918	37	4,710	29	507	14	48,477	39	5,022	32	900	22
Total	357,986	43	88,536	40	4,516	14	394,931	46	134,589	46	7,571	23

Sources:

U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Earned Degrees Conferred 1970-71*, NCES 73-11414 (Washington, D.C.: Government Printing Office, 1973), p. 12; and

U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Earned Degrees Conferred 1975-76* (Washington, D.C.: Government Printing Office, 1978), p. 15.

science, statistics, personnel administration, or other similar fields. Conversely, areas in which professionals of both sexes are scarce, such as business administration. engineering, and medicine, offer a particularly favorable outlook for women, as a result of affirmative-action programs (*Intellect*, January 1977, pp. 211-12).

In 1976, women earned more than half of the master's degrees in only six fields: home economics, library science, foreign languages, education, health fields, and letters (see Table 3). At the doctoral level, the number of degrees awarded to women has been steadily increasing. But women continue to cluster in the traditionally female fields. Women earned more than 33 percent of total doctorates awarded in 1976 in only five fields — library science, home economics, letters, foreign languages, and education.

As table 3 shows, in every discipline except engineering women earned a smaller proportion of the total degrees awarded at each higher level of educational attainment. As the degree level rises, so does the percentage of men receiving degrees, even in traditionally female fields. For example, men earned 29 percent of the doctorates in home economics, although they earned only 9 percent of the master's and 4 percent of the bachelor's degrees (U.S. DHEW, National Center for Education Statistics 1978b, p. 15). But there was no similar increase in the number of women earning degrees in male fields at higher levels.

Information about the attrition of students, male or female, is practically nonexistent. Information is not available about students who drop out of school and return later to finish, or students who move from one institution to another, or students who switch major fields. In an attempt to gauge attrition rates, Cartter and Ruhter (1975, p. 9) developed ratios between bachelor's degrees awarded and first-year graduate enrollments, and between Ph.D.s awarded and first-year graduate enrollments four to six years earlier. They found an improving ratio of women enrolled to women completing programs, and a progressive narrowing of the differences between these ratios for men and women. This perhaps means that the education environment for women is improving and that women are changing their perceptions about the advantages of advanced schooling. If this is true, then in the future women can be expected to earn a larger proportion of advanced degrees.

Institutional Practices That Affect the Participation of Women Students

Factors that account for the underrepresentation of women students in certain fields and institutions are complex and interrelated. The socialization process influences some women to have negative attitudes and expectations about higher education. The life situations of many women constrain participation in educational programs. In addition, institutional policies and practices may actively discriminate against women; or they may do so passively, by failing to encourage and support the entrance of women and their earning of degrees. Potential institutional barriers to the full participation of women students are most readily found in admissions; financial aid; student services; and rules, regulations, and requirements.

Admissions

Prior to the passage of Title IX of the Education Amendments Act in 1972, many institutions discriminated against women applicants through admissions practices such as sex-based quotas. The effect of Title IX on current admissions practices is difficult to assess, because little information is available about the ratio of applicants to acceptances or the qualifications of those rejected. Women are disproportionately enrolled in certain types of institutions and programs, but it is not known to what extent this implies an imbalance in acceptance of women applicants.

There is evidence to suggest that in practice (if not stated policy), admissions standards are higher for women than men in many institutions of higher education. A 1977 survey of 198,641 entering freshmen indicated that 46.6 percent of the women but only 33.4 percent of the men had high school grade-point averages of B+ or better (Cooperative Institutional Research Program 1977, pp. 15, 31). The entering women were also more likely than men to have been high achievers in all types of extracurricular activities except science contests and varsity athletics (U.S. DHEW, National Center for Education, Westervelt 1975, p. 6).

Walster, Cleary, and Clifford (in Astin 1976a, pp. 141-42) studied the effect of an applicant's race or sex on the likelihood of his/her being admitted to college. Identical applications, except for variations in race, sex, and ability level, were submitted to 240 institutions. All things being equal, men were more frequently accepted

than women. This was particularly true of students at lower ability levels. The authors concluded that women are more likely to be discriminated against in admissions when they are of modest ability.

Interviews with admissions officers at 19 institutions revealed informal and unwritten policies that affect the admissions process. Two reported that they took sex into consideration in admissions because of housing limitations. One reported that the institution had always enrolled more men than women, and that if they were to accept a larger proportion of women, a decision might be made to hold a balance between sexes. One college had guidelines on maximum and minimum enrollments of men and women. Another reported that it accepted the same proportion of men and women applicants. Only one institution in the sample of 19 reported that it was actively recruiting women (Astin 1976a, p. 150).

Other admissions practices and policies that adversely affect the entrance of women are limitations on age, part-time study, and transfer of credits. Randolph, in her research on mature women in doctoral programs, interviewed faculty and administrative officers, department heads, and graduate school deans. Her findings indicated that applicants over 40, male and female, were not encouraged to enter any program requiring four to five years to complete (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 10). While such a policy appears on the surface to treat men and women equally, it has a greater impact on women, who are much more likely to interrupt their undergraduate education or postpone their graduate education because of marriage or motherhood. Some women are able or willing to return to school only after their family responsibilities have decreased.

Rules and regulations regarding part-time study also have a great impact on women, who frequently find full-time study impossible because of family responsibilities. Some institutions discourage part-time students by charging them a higher rate of tuition or by stipulating a minimum fee per semester. The Modern Language Association study of graduate departments in 1971 found that 39 percent prohibited part-time study. In recent years, however, the participation of part-time students has been facilitated through external-degree and continuing-education programs. Hunter's study of 15,710 graduate students at 68 institutions found that 67 percent of the women were part-time students (U.S. DHEW, National Center for Education Statistics). Hembrough (1966) found that 80 percent of the wives of students, faculty, and staff at the University of Illinois who were not attending class, and 50 percent of those who were, stated

that only part-time enrollment was possible for them (cited in U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 10). Difficulty in transferring credit from one institution to another is another problem for wives following husbands from one place of employment to another. Women with previous college courses often find universities unwilling to accept transfer credits, particularly those more than a certain number of years old.

Admissions to Graduate Programs — According to Solmon (1976), the criteria and methods by which departments make decisions about applications for graduate programs are critically important to women. Accepted measures of potential for academic success include past grades, letters of recommendation, and standardized tests for predicting ability, such as the Graduate Record Exam. The major problem in determining whether graduate admissions committees are using sex-neutral selection criteria is that most decisions are made within academic departments in closed meetings. Few departments document this selection process or provide specific information about why candidates are denied admission (Solmon 1976, p. 11). In such meetings, negative attitudes and assumptions about women's ability, motivation, and perseverance may bias decisions. In any case, attitudes about the motivation of women as graduate students that reflect male bias are found in letters of recommendation. Examples of sex-biased statements in letters of recommendation for National Science Foundation fellowships are:

"I kept wondering how a girl could be so smart."

"If she were single and plain, I would expect her to be an outstanding Ph.D."

"Miss K . . . is also musically and structurally gifted."

"I think she'd make some young anthropologist a good wife" (Solmon 1976, p. 13).

Research by Harris (1970), Roby (1973), and Sells (1973) showed that if merit is the most important selection variable, women are not being admitted in sufficient proportions. This viewpoint is generally based on studies indicating that women have higher grade-point averages from high school to graduate school (Feldman 1974; Harmon 1965, Hole and Levine 1971, cited in Solmon 1976, p. 12). Scott noted that women should expect to be accepted in higher proportions, in fields where they are in the minority, because women who apply to traditionally male-dominated fields such as medicine, mathematics, physics, or economics do so because they have exceptional ability and straight A's in their fields (Solmon 1976, p. 13). However,

comparative Graduate Record Examination scores have not indicated the greater ability of women. Ree's study at Yale (1974) reported that women rated slightly higher than men on verbal ability, while men rated significantly higher than women on quantitative ability (Solmon 1976, p. 12). This may be because women tend to select undergraduate majors that do not require extensive mathematics preparation.

To determine fully the effect of current admissions practices and criteria on women students, more information is needed about measures of student ability and motivation, about how admissions committees operate in making decisions, and about the men and women who are not admitted to graduate schools.

Financial Aid

Whether discrimination exists in awarding financial aid to women students continues to be a controversial topic. Available information is conflicting, frequently biased, noncomparable, and not timely, as much of it was collected between 1969 and 1972. Recent trends in the awarding of financial assistance appear to have been affected by Title IX regulations, which specify procedures.

According to Westervelt, federal policies as well as institutional practices with regard to financial assistance can have a distinct impact on women students. The restriction of some forms of aid to those who enroll full-time can affect women whose only choice is to attend part-time because of family responsibilities. (It can be a similar barrier to men who work full-time.) Another barrier to women can be the lack of low-cost child-care facilities or financial aid to pay for child-care expenses. This situation is particularly acute for the single mother who needs training to become self-supporting, but who cannot afford the costs of child care while she attends school. Other barriers particularly affecting women are occasional subtle forms of bias against married or pregnant women or mothers, the lack of deferred payment plans, and legal restrictions based on residency or domicile and contractural rights of married women (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, pp. 16-18).

A recent study by Brown and Heath (1977) in 40 midwestern colleges and universities sought to determine what awards financial aid directors would make to men and women students. They used simulated aid profiles that were identical except for sex. The prediction that financial aid directors would develop significantly different financial aid packages for male and female applicants and that males would receive greater dollar amounts was not upheld. This contra-

dicts the findings by Snyder in a study prior to the Title IX regulations that male students in Pennsylvania community colleges received larger financial aid packages. The authors speculated that the existence of Title IX has made financial aid directors more aware of sex discrimination issues and more faithful in following financial aid guidelines (Brown and Heath 1977, pp. 355-61).

Sources of Financial Support for Undergraduates — Students draw on a variety of sources of financial support. Differential treatment of women and men by the various sources results in a different distribution of the total financial aid available. According to Astin (1976a), a major source of support for women is their parents. Sixty-five percent of white women, as compared with 47 percent of white men, use parental aid as a major source of support for the freshman undergraduate year. (Blacks are less likely to receive parental support.) The heavy reliance of white women on parental support disadvantages women from low-income families, since these families traditionally view their sons' education as more important. Also, the reliance on parental financial support continues early patterns of dependency on parents and makes women more susceptible to parental pressures (Astin 1976a, p. 182).

Earnings from self-employment are another means by which students finance their education. A study of college dropouts found that a student's chances of completing college were significantly influenced by the student's type and extent of employment (Astin, A. W., cited in Astin 1976a, p. 183). According to Bengelsdorf (1974), women have fewer opportunities for employment, and if they do find jobs, they receive lower wages than men (cited in Astin 1976a, pp. 183-84). Friedman, Sanders, and Thompson (cited in Astin 1976a, pp. 183-84) found evidence of sex discrimination in federally financed work-study programs. Men were about twice as likely as women to hold high-level jobs regardless of class standing, major fields, or grade-point averages. When men and women were employed in similar jobs, men were usually paid more than women.

Scholarships and grants are another important source of student aid. Although the percentage of women (46 percent) receiving scholarships as part of their support is slightly greater than that of men (42 percent), the median dollar amount for women is $970, compared with $1,632 for men (Astin 1976a, p. 221). The Basic Educational Opportunity Grant program, created in 1972 by federal legislation, was intended to guarantee each student minimal assistance in meeting college expenses. However, the requirement of a parental contribution may create insurmountable problems for women whose parents see

less value in educating their daughters and thus are unwilling to make a contribution (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 14). Past use of sex-restricted scholarships in public institutions may have been discriminatory. However, in institutions covered by Title IX regulations, award of differential aid based on sex-restricted scholarships is now prohibited.

Two federally sponsored loan programs (National Direct Student Loans and Guaranteed Student Loans) provide important sources of funds to students. Though an increasing number of women undergraduates and graduate students are borrowing to finance their education, the work and income patterns of women are different from those of men. Women facing a job market that discriminates against them, or who plan to take time out to raise a family after college graduation, may be very unwilling to take out loans. A 10-year follow-up study of 1961 freshmen by El-Khawas and Bisconti shows that men are more likely than women to borrow money and twice as likely to take out loans of $4,000 or more (cited in Astin 1976a, p. 187).

Military-related benefits are another type of financial aid providing substantial support to men. Veterans' benefits support about 6 percent of male and 1 percent of female undergraduates. Acceptance at the military academies and award of ROTC scholarships to women is part of the very recent trend by the military to eliminate the differential treatment of women.

Sources of Financial Support for Graduate Students — According to studies by El-Khawas and Bisconti in 1974 and Creager in 1971, men and women graduate students draw about equally on fellowships, investments, savings, parental support, loans, and other sources for financial support, except for two categories. Twice as many men as women indicated that a nonacademic job was a major source of financing for their graduate education, whereas over twice as many women as men indicated the spouse as a major source. While fellowships and scholarships were evenly divided between men and women, assistantships, particularly in research, were more frequently given to men (31 percent) than to women (25 percent) (Astin 1976a, 201-205). Research and teaching assistantships often involve close working relationships with a faculty member and have potential for assignments leading to career upward mobility. Solmon (1976) concluded that women graduate students overall receive proportionately less financial aid than men. This is because a much larger proportion of women are enrolled in life and social sciences and arts and humanities, where financial aid is less available, and receive teaching assistantships that are not as well paid as the research assistanships

in the physical sciences, mathematics, and engineering, where women's enrollment is the smallest (Solmon 1976, p. 103).

The El-Khawas and Bisconti follow-up study also asked respondents who had gone to graduate school why they did not enroll in the graduate program of their first choice. Three in five men but only three in ten women said they had not been accepted. In contrast, 25 percent of the women but 11 percent of the men said that they did not because of a lack of financial aid (cited in Astin 1976a, pp. 205-6).

The evidence as to whether discrepancies exist between the sexes with respect to financial aid at the graduate level is contradictory, and further investigation is warranted to answer questions such as these: Is there a difference in the number and amount of financial awards made to men and women? Are these differences significant in terms of the proportions of men and women enrolled by discipline and the proportions applying for aid? Are differences related to sex, to the amount of funds available in the different fields, or to market prices for instructorships in different fields?

Institutional Rules, Regulations, and Requirements

Both women and men can be discouraged by an array of institutional rules and regulations that are not appropriate to their situations. Examples are policies related to transfer credits, credit for nonclassroom learning or by examination, and time limits for degree completion. Full-time residency requirements are frequent in graduate programs. Even in the face of persistent shortages in nursing and social work, there have been very few efforts to modify regulations stipulating full-time study in those fields (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, pp. 18-26).

Student Services

Services institutions provide or fail to provide can significantly influence student enrollment and retention. The effects of counseling, career guidance, health services, and housing, particularly as these services apply to the needs of women, are considered below.

Counseling — Numerous anecdotal reports and some empirical studies have shown that the tendency of girls and women to limit their career and college aspirations is at least partially a result of the counseling they receive in high school and college. The comment of a student at the University of California at Berkeley in 1970 is typical:

> . . . my parents were told not to *allow* me to follow a science major! They were contacted privately and told they were very foolish to allow

me to continue a major in physics or nuclear engineering because a woman would "never" be hired in these fields (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, pp. 26-27).

Pietrofesa and Schlossberg studied counselor behavior in interviews. They used counselees who presented themselves as recent undergraduate transfers with high mathematical ability, trying to decide between a math or elementary education major. They found that 80 percent of both male and female counselors advised the young women to enter elementary teaching (U.S. DHEW, Westervelt 1975, p. 27). In a study at two-year colleges, women reported one of three types of contact with college counselors; they had never seen a counselor; they saw a counselor for only the most routine or required matters; or they went to a faculty member instead (Moore and Veres 1975, p. 51). In general, counselors were viewed as too busy, too bossy, too fixated on college admissions, or just incompetent. Women students counseled by men generally felt the experience was not satisfactory. As one woman put it: "He was a nothing. I might as well have [seen] the janitor" (Moore 1974, p. 5). It appears from these studies that very much needed are counselors who are oriented to the actual responsibilities and emerging opportunities of contemporary women — whether affluent or poor; rural, suburban, or urban; adolescent or middle aged; full-time or part-time.

Counseling services are particularly necessary for the reentering mature woman. In 1960, there were no centers of continuing education for women and no counseling services for adult women seeking further education; however, by the early seventies there were some 500 scattered across the country (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 28). A case study of 15 continuing-education programs for women showed that counseling has been a major service in each since the beginning (Leland 1976, p. 27). Much research is needed with regard to counseling of mature women. Little information is available about the age, ethnic, and social-class variables that influence women's decisions and the particular problems of minority and lower socioeconomic status women.

Career Guidance — Gould has reported evidence of employer bias against women in recruitment literature and campus visits by recruiters for major industries and businesses. She recommends that college placement officers and faculty working on student placements refuse to post discriminatory recruitment materials (1970, cited in U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 28). The Minority Women's Employment Program of the U.S. Department of Labor recommends that colleges begin career

guidance in the freshman year, so that students have a practical feeling for the labor market. With regard to the career counseling of minority women, Sexton points out that many placement officers are not even aware of how many blacks and Hispanics are graduating from their institutions (U.S. Department of Labor 1977, p. 35).

Health Services — An American Association of University Women's (AAUW) survey of 750 member institutions found that birth-control information or counseling was provided by the health services in only 43 percent of the schools surveyed. Some referred women to physicians outside the institution. The best services to married and pregnant women students were provided by the large public institutions, which had more medical resources and a heterogeneous population of students. Small, private schools were liberal in policy, but their health services for women were limited because of available facilities and staff. Women's colleges appeared to be the most conservative institutions regarding all aspects of birth-control counseling and services. Less than half of the 454 member institutions responding to the AAUW survey provided birth-control information (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, pp. 29-31). Astin's survey of 119 institutional catalogs found gynecological services available at only 6 percent of the four-year institutions and none of the two-year institutions or proprietary schools. Campbell speaks strongly on the issue:

> If complete general health care is offered to men, but women must go outside the [campus] health service . . . for care for uncomplicated medical problems of the sexual-reproductive system, this is discriminatory (cited in Astin 1976a, p. 154).

To meet the health needs of women students, the Project on the Status and Education of Women advocates the establishment of complete birth-control and sex-counseling clinics within campus health services (Astin 1976a, p. 154).

Child-Care Services — The availability of child-care facilities can be the factor deciding whether women enter, reenter, or continue their educations. The AAUW survey found that only 5 percent of the institutions surveyed provide some kind of day-care services for students with small children (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 29). Only 11 percent of a sample of two-year colleges and 2 percent of four-year colleges indicated that they provide child-care facilities (Astin 1976a, p. 155). Yet women frequently cite the availability of child-care facilities as their most critical problem. A Berkeley study found that about 25 percent of

the graduate women had children, but that the number of public child-care facilities was inadequate and the cost of private facilities was prohibitive. A University of Chicago report stated that 33 percent of men with children and 77 percent of women with children implied that their academic work was hampered by the need to care for their children (cited in U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 29). There is no present indication that institutions are in a hurry to establish child-care services or that there will be massive federal support for such programs.

Housing — At one time, women students lived in dormitories, ate in dining halls, and were supervised by chaperones. Recent research regarding coeducational housing and its effect on women students is inconclusive. A study by Lever and Schwartz (1971) at Yale suggested that coeducational housing in situations where women are in the minority interferes with the ability of women to develop strong friendships with other women and to acquire self-respect. Brown, Winkworth, and Braskamp found that the proximity of the opposite sex appeared to prompt women to think more about marriage and sex roles than living in single-sex housing did (cited in U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 2.). Others find that students chosing coeducational living arrangements may be higher in self-actualization and interpersonal competence than those who do not. A study by Reid (1974) of two groups of students, one living in single-sex residence halls and the other living in residence halls that had been coeducational for two years, found that coresidency was on the whole a positive and growth-producing experience for women. She found that women formed more friendships with men and were much more comfortable in their presence (pp. 551-54).

Women students have attitudes, assumptions, and perceptions of the future that originate in an early socialization process. Astin comments:

> People themselves are in large part responsible for what happens to them, in that they have come to perceive themselves in certain ways. They are aware of certain alternatives, consider certain options, and take certain actions that may lead to certain outcomes. For example . . . the underrepresentation of women in elite institutions of higher education may be attributable to their failure to apply to these institutions, which in turn may be attributable to their perception that they would not do well in such a setting; in this case, their underrepresentation can hardly be blamed on discriminatory institutional policies. Nonetheless, discrimination may be operating in the larger society to stifle their opportunities and limit their options, a discrimination that makes itself felt early and in subtle ways (Astin 1976a, p. 80).

Sources of Socialization

Socialization can be defined as "the process of bringing the individual, particularly the child, to understand and accept the customs, standards, traditions, and culture of the group of which he is a member and to cooperate actively with that group" (Astin 1976a, p. 81). Children quickly categorize themselves as either male or female, and realize the limitations of either role. Their early experiences as a member of one or the other sex are manifested in adult behavior in different kinds of achievement, different levels of self-esteem, different motivations, and different attitudes (Astin 1976a, pp. 81-85). Thus the woman makes decisions about her future based not only on the opportunities available to her, but on her self-concept, expectations of her future roles, and her aspirations.

> Under pressure from parents, teachers, and peers [and the media], children grow up with certain expectations about aspirations for adult roles. . . . In their study of kindergarten and sixth-grade students, Schlossberg and Goodman (1972) found that even the kindergarteners could identify traditionally male and female occupations; moreover, the occupations they saw for themselves fell within the stereotypes. . . .
>
> . . . Maccoby and Jacklin (1974) commented on the remarkable uniformity of parental socializing behaviors: Parents do tend to encourage their children to develop sex-typed interests . . . [and] to believe that children of each sex have a different set of "national" assets and liabilities. Since people interpret new experiences on the basis of previous learning, differential socialization will affect not only the choices they make but also the alternatives they see as available. . . .

> . . . [by] the secondary level, when decisions are made about . . . [college] plans, students are already products of an intensive . . . [socialization process] that has taught them which behaviors, values, and goals are appropriate for their sex (Astin 1976a, pp. 83-85).

This socialization process is continued and reinforced by the counseling most students receive in high school and college that generally reflects society's stereotypes and by the presence or absence of role models for young women to observe in a variety of careers.

Results of the Socialization Process

Broverman's study of sex-role stereotypes found high agreement among societal groups about which qualities are viewed as masculine and which regarded as feminine. Men are viewed as aggressive, independent, dominant, and logical. Women are seen as passive, dependent, subjective, emotional, noncompetitive, and indecisive. When asked to characterize what constituted a healthy adult, a group of 79 clinicians selected the male-valued stereotypes to describe a healthy man, female-valued stereotypes to describe a healthy woman, and male-valued stereotypes to describe a healthy adult. Thus a woman could not be both a healthy woman and a healthy adult. According to Broverman's findings, sex-role stereotypes assign women a second-class, passive, and nonintellectual role, or label them as unfeminine (cited in Kane 1976, p. IX-12). Such stereotyping greatly affects women's self-esteem and achievement motivation as well as men's attitudes regarding women's potential and roles.

The effects of socialization can be seen in the variation between self-ratings of men and women entering college. Women, in general, had a less favorable view of their own academic and intellectual abilities than did men. Women were more likely to rate themselves high on traits consistent with a concept of femininity, such as artistic ability, cheerfulness, understanding of others, writing ability, and sensitivity to criticism. Men were more likely to rate themselves high on such characteristics as intellectual self-confidence, originality, mathematical ability, public-speaking ability, and leadership (Astin 1976a, p. 94). Rosenkrantz found that both sexes tended to agree on masculine and feminine characteristics, and to value masculine more than feminine characteristics in either sex (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 53). His findings were confirmed by Goldberg, who asked male and female college students to evaluate identical essays. Students consistently placed a lower value on essays purportedly written by a woman, even when evaluating qualities in which women are considered to excel, such

as verbal fluency, or when the essay was in a woman's field, such as education (U.S. DHEW, National Center for Education Statistics, Westervelt 1975, p. 53).

Research on achievement motivation (Atkinson (1958) and Maccoby (1963)) has shown that a girl who maintains the qualities of independence and active striving necessary for intellectual mastery defies the conventions of sex-appropriate behavior and must pay a price in anxiety (cited in Horner 1975, p. 207). For women students, achievement motivation is critically important to level of educational attainment. Horner's research led her to believe that when a girl comes to expect negative consequences from achievement and considers masculine the qualities and behaviors she uses to achieve success, she can experience a fear of success that conflicts with achievement motivation. If a woman plays down her need to achieve by failing when she might succeed, she disappoints herself and may never reach her full potential. On the other hand, if she is achievement oriented and strives to succeed, she is branded as unfeminine and viewed negatively by others (Horner 1975, pp. 207-8). Horner's conclusions have been questioned by later researchers, who suggest the same phenomenon is found in men.

Astin has suggested that women have evolved a number of methods to reduce the conflict between achievement motivation and traditional female behaviors. Some women do not regard achievement-motivation behavior as particularly inappropriate. Others satisfy their achievement needs vicariously, through the success of husbands and children. Some choose to pursue feminine careers or remain in low-status positions. Others conceal accomplishment — for example, by reporting to parents or friends a grade lower than the one actually received. And some women compensate for achievement striving by being extremely feminine in appearance and behavior, or by fufilling all the functions of the traditional feminine role of wife, mother, and homemaker in addition to having a career (Astin 1976a, p. 102).

Liss (1975) believes that feminine stereotypes are learned early and unconsciously manifested in the career lives of adult women. She studied the low perception of sex discrimination on the part of women faculty at a multicampus university when statistical data documented the inequities in salary, promotion, rank, and tenure (pp. 209-21). In addition to structural reasons, such as lack of access to data and acceptance of myths about merit, Liss attributed the women faculty's denial of sex discrimination to the socialization process and resulting passivity. Her interviews indicated that women faculty felt that surviving the hurdles as women in order to progress up the path from

student to faculty status required that they "feed back the facts as the system views them and defer to men in almost every position of authority" (p. 220). It seemed safer to the women she interviewed to agree with the dominant values of the institution they had labored so strenuously to enter, and to defer their aspirations of higher rewards to some distant point in the future. Additional research is needed into the relationship between achievement motivation and the pervasiveness of feminine stereotypes in career women.

The Importance of Role Models

The crucial role of an older woman model is evident in biographies of women successful in politics and the academic world (Douvan 1976, pp. 5-20). There are also data about the effects of working mothers as role models. Studies of adolescents and college women consistently report that girls and women whose mothers worked outside the home are more likely to aspire to higher skills and more innovative and prestigious jobs than are women whose mothers were full-time housewives (Baruch 1972, Tangri 1972, Douvan and Adelson 1966, cited in Douvan 1976). In a further study of undergraduate women, Walum (1974) found a significant association between career aspirations and memories about heroines read in childhood books. Walum's study of 25 married women Ph.D.'s found that her subjects, all of whom were managing to integrate professional activities with traditional family roles, had strong positive identifications with some female model as well as with their fathers (cited in Douvan 1976, p. 7).

Tidball's research on role models examined the backgrounds of women listed in successive generations of *Who's Who of American Women*. She found that most of these women were graduates of women's colleges that had almost twice as many women faculty per 1,000 students as do coeducational institutions (1973, p. 133). She found a highly significant positive correlation between the numbers of women achievers and the numbers of women faculty. The number of men faculty had no significant effect on the output of women achievers, while the presence of men students had a negative effect. She concluded that women's colleges provide the most positive environment available for women in higher education today because of the relatively larger degree of support of women's issues by men faculty, the relatively high self-esteem reported by women faculty, and the large proportion of women faculty and administrators (Tidball 1976, p. 387). Another interpretation of Tidball's conclusions could be that the number of women achievers is due to the highly selective

nature of the women's colleges studied: they accept only exceptional women students who would be likely to succeed regardless of their environment.

Faculty members tend to identify more closely with and support the aspirations of students of their own sex (Tidball 1976, pp. 378-79). Since women constitute a relatively small proportion of faculty on most campuses, positive role models are likely to be in short supply for women students. The situation is exacerbated by the fact that women faculty frequently are lodged in lower ranks without tenure and earn less than their male colleagues in every rank; therefore, whether they are viewed as successful role models in an academic career by women students is questionable. Some women, however, rise above these disadvantages to project a superwoman image. Graham (1970, p. 1286) has described the superwoman faculty as "rare individuals who manage to marry a brilliant and successful husband, have five children, write intelligently on a variety of topics, assume a major administrative position, and at the age of 40, be featured on the beauty pages of a woman's magazine." But Graham notes that few women students regard the possibility of emulating such success as realistic.

The Effect of Faculty and Administrators' Attitudes

As women students progress through the higher-education system, they are influenced subtly by their interactions with faculty administrators. Negative attitudes toward women students are generally manifested by a lack of encouragement or support or by overt and convert expression of sex stereotypes and male expectations regarding women's roles and behaviors. Assumptions about women abound: they will drop out of school to get married and have children; family obligations will limit their productivity if they do earn degrees; investing large sums of money and a great deal of time in the graduate education of women is a risk because they won't be in the marketplace as professionals. The following comment was made by an academic vice-president:

> Too many young women are casually enrolling in graduate schools across the country without having seriously considered the obligation which they are assuming by requesting that such expenditures be made for them. And they are not alone to blame. Equally at fault are two groups of faculty — undergraduate instructors who encourage their female students to apply to graduate school without also helping them consider the commitment that such an act implies, and graduate admissions counselors who blithely admit girls with impressive academic records into the graduate programs without looking for other evidence

that the applicant has made a sincere commitment to graduate study (Scully 1970, cited in Feldman 1974, p. 12).

When negative perceptions or stereotypes are expressed by high-level administrators, they are likely to influence faculty, staff, and students and become institutionalized in recruitment, admissions, and financial aid practices. In Solmon's opinion, institutional practices based on such assumptions can cause women to fulfill the prophecy by dropping out or taking longer to finish (1976, pp. 8-9).

Male faculty are less likely to establish mentor relationships with women students because of negative attitudes about the potential of women students to complete programs and be productive scholars, and negative images of women faculty as being less productive and occupying less prestigious positions than men (Holmstrom and Holmstrom 1974, p. 11). Another important byproduct of negative male faculty attitudes is their effect on women's self-images, aspirations, and motivation. Feldman (1974, pp. 67-71) showed that the overall percentage of graduate students and faculty who agree that females are not as dedicated to graduate work as males is a good predictor of female enrollment in the field. Fields with a high percentage of such views about women tend to be male dominated, and where women are in a minority in a department there is usually more prejudice against them.

A predominance of men faculty can cause problems for women graduate students in the establishment of mentor relationships. In addition to the attitudes and stereotypes some men faculty possess, "sexual ambiguity causes tension in cross-sex relationships. The definition of roles is a potential problem for both the male professor and the women student, while a collegial relationship may develop comfortably between two men" (Fox (1970), cited in Solmon 1976, p. 31).

Mentor relationships may be more important for women students than for men. Women and men enter their disciplines with fairly equal academic competencies, but they differ in self-confidence. Among students with a mentor relationship, 43.7 percent of the men and 42 percent of the women had published an article. Among students having published an article, 24.1 percent of the men, compared with 39.1 percent of the women, were dissatisfied with their ability to do original work, and 67 percent of the men compared to 45 percent of the women expected to make a significant contribution to knowledge in their field. Without the mentor relationship, 34.7 percent of the men but only 24.3 percent of the women published an

article. These figures appear to indicate that a close relationship with a mentor who provides support and encouragement is more important for women, who need reassurance regarding their aptitudes and abilities (Feldman 1974, p. 121).

Women's Studies and Women's Colleges

For many adult women, the socialization process produces a distorted sense of themselves and their role in society. Two well-established compensatory mechanisms for overcoming the negative effects of the socialization process are women's studies and women's colleges.

Women's Studies

In the past seven years, more than 200 programs in women's studies have been organized and some 10,000 courses developed by 6,500 faculty members in 1,500 different institutions (Howe 1977, p. 1). Such expansion has led to the creation of a professional association to give status to one of the newest and fastest growing academic fields in higher education (*Chronicle of Higher Education*, January 31, 1977, p. 8). Growth characterized women's studies programs, even in institutions where the overall enrollment is declining. At San Francisco State, for example, women's studies grew from an enrollment of 270 in eight courses in 1970-71 to 68 courses enrolling 2,005 in 1975-76 (Howe 1977, p. 18).

When women's studies began on individual campuses, their usual purposes were to raise the questions about male-centered curricula, to add women's studies courses to the curriculum, and to establish women, sex roles, and socialization as legitimate topics for study and research. Seven years later, these original goals have been expanded to include the transformation of the curricula of some disciplines; the development of interdisciplinary curricula focused on women, men, and sex roles; and the expansion of research (Howe 1977, pp. 2-4). Two disciplines particularly affected by the new research about women are history and psychology, which in the past had deemphasized the important contributions of women to society and the differences between men and women.

Howe's study of programs at 15 institutions indicated that women's studies programs vary from the traditional academic model. Most are not departmentally based. A part-time administrator, usually working with a small budget, reports to a dean or a provost, in keeping with the interdisciplinary nature of the curriculum. Governance of the program is generally by a council or committee that varies greatly in its membership. Either faculty are recruited from academic

departments and given joint appointments in women's studies, or part-time and temporary appointments are made. Few faculty are hired to teach women's studies on full-time, tenure-track appointments. An unusual combination of youth, age, and varieties of experience characterizes a heterogeneous faculty committed to intense scholarly activity and dedicated to educational equity (Howe 1977, p. 36). Research and publication are emphasized, as the survival of women's studies programs depends on their academic credibility. Within the classroom, experimental approaches to teaching are tried. There is a complexity of materials covered and issues discussed, a high level of participation by students, and an emphasis on including information about minority women in the curriculum.

The main problems faced by women's studies programs are caused by tight budgets. They affect staffing patterns and the status of the faculty within the programs, and do not generally provide for graduate assistantships. Despite the absence of good wages or status, many fully credentialed faculty are willing to work in women's studies programs. They often provide an interdisciplinary environment in which scholarship is respected, good teaching is valued, and hierarchical status is not an issue (Howe 1977, p. 22). The stimulation of teaching in women's studies, however, is not without its price in career terms. While women's studies faculty are increasingly well qualified with respect to degrees and publications, they face instability in employment and insecurity about the future. Joint appointments to women's studies programs and to an academic department create strains for these faculty, who must convince the tenure-granting department that their research is valuable. Howe reports that one young scholar stated that teaching women's studies "allowed me to integrate my skills and my feelings," but it had "a mostly negative impact" on her professional life. Howe (1977) comments:

> The scholarship essential to the development of women's studies courses and programs is not understood as scholarship at all, but rather as service to the campus or community. Even when there are publications of exceptional significance to women's studies . . . such work is not valued, not wholly out of malice, but, according to sympathetic department heads and university administrators, out of ignorance (p. 92).

Numerous studies (Granger 1972; Howe 1975; Robinson 1973a; Ohmann and Shuwalter 1971; and Rosenfelt 1973) show that a broad range of campus activities — classes, films, workshops, and lectures — associated with women's studies have had an impact on the entire community. A greater interest in and awareness of the inequities fac-

ing women faculty and students and a higher level of consciousness regarding women's issues have resulted. For faculty, new areas of research have opened up, and new teaching styles have been developed. New courses have been added, and old ones redesigned to reflect an emphasis on women. Collaboration in a joint endeavor has made some men more aware of women as colleagues on the faculty.

The primary effect has been on the students themselves. An evaluation of the impact of women's studies was conducted at San Diego State University through a questionnaire administered to 250 students. Ninety-three percent reported a wide variety of impacts, sometimes quite intense and reaching into many different aspects of their lives, from women's studies courses they had taken. Effects most frequently cited: new ideas obtained (95 percent), changes in attitudes concerning women (82 percent), concerning themselves (76 percent), concerning men (75 percent), and concerning child-rearing (72 percent). Students reported feelings of greatly increased self-understanding, self-esteem, and self-confidence, and an upgrading of educational and career goals (Elovson and Cockcroft 1977, pp. 1-2).

Women's Colleges

The nineteenth-century founders of women's colleges sought to duplicate the same rigorous curriculum available in the best men's colleges. They believed that women's minds would benefit equally from intellectual stimulation. They wanted to bring women's talents to bear on the world outside the college in professional, business, and artistic activities (Conway 1978, p. 8). Now the future of women's colleges is in doubt. Under pressures of financial exigency, women's colleges have declined in number, from 300 in 1960 to 146 in 1971. They enroll less than 10 percent of the total number of women college students (Carnegie Commission 1973, p. 70).

Despite these problems, there have been some signs of a renewed commitment to women's colleges. Applications for admissions to colleges in the Women's Colleges Coalition increased by 3.8 percent this year. Enrollments have also been increasing steadily (*Equal Opportunity In Higher Education*, 1978). Mount Holyoke, Smith, and Wellesley, among the leading women's colleges, all made carefully considered decisions to remain single-sex in recent years. The Smith report commented:

> . . . at the present time, when the status and roles of women in American society are being reexamined with a view to their improvement, an important option that should remain open to women is attendance at a

college of the highest caliber in which women are unquestionably first class citizens (Carnegie Commission 1973, p. 71).

Why are women's colleges choosing to remain single sex in an era in which coeducation predominates? Why do various studies show that women who attend women's colleges have academic records superior to those of women students in coeducational institutions on the basis of such measures as persistence, proportion going on to graduate education, and proportion receiving Ph.D.'s?

Proponents of women's colleges maintain that the reasons are many and not solely attributable to the high entrance requirements of some of these colleges and the unusual qualifications of some of the women students admitted.

Tidball (1973) notes that the years from 18 to 21 are those in which one develops a firm identity and the capacity to become involved with others. It is a time when all past identities, both negative and positive, are reevaluated, integrated, and redirected toward what is perceived to be a meaningful future. It is a time for a young woman to determine what kind of person she wants and can realistically aspire to be (p. 131). According to proponents, women's colleges can play a crucial role during this period. By providing an environment in which women can devote four years to their intellectual and personal development, in an atmosphere of positive reinforcement and respect, women's colleges counteract the negative conditioning of the previous 18 years (McCarty 1977, p. 67). A recent emphasis on continuing-education programs for older women provides a variety of role models and life styles for younger women students.

By and large, women's colleges stress the importance of significant female leadership figures by emphasizing their equivalent or majority representation on governing boards, in top administrative positions, and throughout faculty ranks (Conway 1978, p. 9; and Tidball 1973, pp. 131-35). In the absence of men students, women have far more opportunities for leadership roles in student government, student newspapers, and self-governing student committees than they do in coeducational institutions. Women are encouraged to major in nontraditional fields. Thirteen percent of the graduates from the Seven Sister colleges, as compared to 7 percent of all women graduating in 1969, received bachelor's degrees in the natural sciences and mathematics (Carnegie Commission 1973, p. 72). Conway suggests that historically these colleges have also invested more resources in personal and career counseling, because leaders in women's colleges saw that their aspirations for their students were at odds with the

aims of society at large and that only energetic compensatory efforts could build links with women achievers and alien occupational structures (1978, p. 9). Thus women's colleges emphasized career orientation, life-planning programs to help students articulate both career and family goals, and the use of alumnae to help students to find jobs and internships.

What are the options for the future? The Carnegie Council recommends that women's colleges enter into arrangements with neighboring institutions so as to provide academic programs in fields like accounting and engineering (1973, pp. 74-75). Such arrangements can both enrich the curriculum and help preserve the existing women's colleges. McCarthy recommends that coeducational institutions seriously consider a cluster-college concept similar to that adopted at the University of California at Santa Cruz, where one of the campuses is entirely for women (1977, p. 65). Tidball recommends that other institutions study the relationships and attitudes between faculty and students and among faculty in women's colleges, to understand better the environment that produces graduates with higher career achievements than those of women graduates of coeducational institutions (Tidball 1976, p. 387).

Women Faculty and Administrators

Past and Present Participation

The employment of women as faculty and administrators in higher education has remained basically the same over the past half century. It has been curiously resistant to change in the past decade, despite the preparation by graduate schools of increasing numbers of women for employment in academe, the passage of equal-employment legislation and affirmative-action regulations, and the raised consciousness of women academics regarding their status. In 1929-30, women constituted 28 percent of all college and university faculty members, but by 1959-60 their participation had declined to 19 percent (Kane 1976, p. III-6). During the seventies, progress in increasing the percentage of women faculty has been frustratingly slow: the current percentage of women faculty is still lower than it was in 1930. There has been some increase, however — from 22.3 percent in 1972 to 25.5 percent in 1977 (U.S. DHEW, National Center for Education Statistics, 1977, p. 3, and *Chronicle of Higher Education*, February 10, 1975, p. 10).

Gaps in the available information about women faculty and administrators are numerous. Only a handful of studies have focused on women administrators, and the participation of women in other, nonfaculty professional positions has seldom been analyzed, except in individual institutional self-studies. Since most research has centered on women faculty, this chapter focuses primarily on their role in that capacity; where relevant information is available, it also considers women in administration.

Women Faculty

Numerous studies (Centra 1974; Cartter and Ruhter 1975; Bayer and Astin 1975; Carnegie Council 1975, and others) have shown that though women represent about one quarter of all faculty, they are found in greater numbers in colleges than in universities, in less prestigious rather than elite institutions, and in certain disciplines; generally they hold positions of lower rank, are less well-paid than their male colleagues, and are more likely to be untenured.

The most important factor affecting the distribution of women among various types of institutions is whether or not an institution is considered "elite." One study found that women's representation was below 10 percent in nine out of 13 elite schools, as compared to

25 percent throughout all types of institutions (Robinson 1973b, p. 203). Women are more likely to be found in the lesser-known institutions, and in four-year and two-year colleges that emphasize teaching rather than research. Their lowest rates of participation are in men's colleges, and their highest participation rates are in women's colleges, where, however, the proportion of male faculty is rising steadily. The participation of women is roughly equivalent in public and private institutions (Kane 1976, pp. III-4-5).

Women faculty also are concentrated in a limited number of disciplines. The 1970 Census determined that 55 percent of all women faculty were concentrated in four fields: art, drama, and music; foreign language; health; and English. Women were least represented in economics (8 percent), law (7 percent), physics (5 percent), and agriculture (4 percent) (cited in Kane 1976, p. III-7). The distribution of women faculty in certain disciplines is far lower than the rate of completion of doctorates by women in the same disciplines. In 1968, for example, Columbia awarded to women 67 percent of its Ph.D.'s in French, 44 percent in anthropology, 36 percent in psychology, and 17 percent in philosophy. However, there were no women on the Columbia faculty in any of those departments at that time (Kane 1976, p. III-7). This situation is echoed in studies of specific disciplines. For example, a study of 184 doctoral-granting chemistry departments showed that in 1973, two-thirds of the departments had no women as assistant, associate, or full professors. Yet these same departments had granted some 10 percent of the Ph.D.'s to women in 1971-72 (Carnegie Council 1975, p. 24). Such information prompted the Carnegie Council to note in its 1975 report on affirmative action:

> . . . although national statistics indicate that women Ph.D.'s are being hired — primarily at instructor and assistant professor levels — in rising proportions, there continue to be problems in many of the traditional male fields. We are not suggesting that in all fields and in all departments, there should be an exact match between proportions of women among recent national Ph.D. recipients and recently hired faculty members, but extremely wide disparities may be indicative of a failure to seek out qualified women in traditionally male departments (p. 24).

Women are typically found in the lower, untenurable academic ranks, as shown in Table 4.

While demonstrating the clustering of women in the lower ranks, data in Table 4 also indicate a progressive trend. Though the profile remains basically unchanged for women at the full-professor level, the percentage of women as assistant and associate professors and instructors has increased each year since 1972. This is most likely the

Table 4. Percent of Women by Rank among All Full-Time Instructional Faculty in Postsecondary-Education Institutions, 1972 through 1978.

Rank	1972-73[1]	1974-75[2]	1975-76[2]	1976-77[2]	1977-78[2]	4-Year Percent Change
Professor	9.8	10.1	9.8	9.6	9.7	− 0.1
Associate Professor	16.3	17.0	17.0	17.7	18.0	+ 1.7
Assistant Professor	23.8	27.3	28.9	30.4	31.7	+ 7.9
Instructor	39.9	41.0	40.7	50.6	50.0	+10.6
Lecturer		38.9	40.4	40.8	42.8	
Total	22.3	24.1	24.3	25.2	25.5	+ 3.2

Sources:

[1]NCES data, cited in *Chronicle of Higher Education*, 10 February 1975, p. 8.

[2]U.S., Department of Health, Education, and Welfare, National Center for Education Statistics, *Salaries and Tenure of Full-Time Instructional Faculty in Institutions of Higher Education*, NCES 77-313 (Washington, D.C.: Government Printing Office, 1977), p. 1.

[3]U.S., Department of Health, Education, and Welfare, National Center for Education Statistics, "Memorandum on Selected Statistics on Salary and Tenure of Full-Time Instructional Faculty," 15 April 1978, p. 5.

result of changes in hiring and promotion practices brought about by affirmative-action regulations. Perhaps because of the recent emphasis on hiring women, nearly one-third of all full-time faculty members under the age of 30 are women (*Chronicle of Higher Education*, September 29, 1975, p. 2). Studies (Bayer and Astin 1975 and Cartter and Ruhter 1975) have found that these women are being hired at terms and salaries comparable to the initial appointments of men. These positive signs of equity between newly hired faculty men and women may be the precursors of improved promotion and tenure profiles for women. Yet Divine (1976, p. 431) reported that recent statistical studies of faculty composition in universities show that women simply have not made the gains in hiring and promotion that would be expected under a bias-free employment system. Women with doctorates have a higher unemployment rate than men with Ph.D.'s, and the largest discrepancy is found in the under-35 age group (Kane 1976, p. II-12). Differences in the rate of tenure are also pronounced: 61 percent of men faculty are tenured, as compared with 42 percent of women faculty (U.S. DHEW, National Center for Education Statistics, 1978c, p. 2).

Research about the causes underlying the current low status of faculty women is badly needed. No study has presented evidence that women are less able than men. Part of the explanation for the status of women faculty may lie in institutional hiring and promotion practices and in faculty attitudes (Chalmers 1972; Johnson and Stafford 1974; Schlossberg 1974; Bayer and Astin 1975; Elder 1975; Divine 1976; and Venning 1977).

Minority Women Faculty

Information about minority women faculty is practically nonexistent. Typically, information about sex or race has been collected, but not information about sex and race simultaneously. (This is being corrected by the use of the new EEO-6 reporting form of the Equal Employment Opportunity Commission; however, the data have not yet been published.) Trends in the status of minority women are even more difficult to establish because of data-collection problems. Census data for 1960 and 1970 are not comparable. Since minority population groups are unevenly distributed in certain parts of the country, regional data, not readily available, are necessary as well as national data (Kane 1976, p. IV-1).

Minority women faculty are scarce in all types of institutions: two-year colleges, four-year colleges, and universities. In 1972-73, white women constituted 93.6 percent of all female faculty, black women

4.8 percent, American Indian women .9 percent, Asian women 1.7 percent, and Spanish-speaking women .5 percent (Kane 1976, p. IV-20).

Black women, who constitute 40 percent of all black faculty, traditionally have taught primarily in the black four-year colleges. Like white women, they are concentrated in lower ranks, untenurable positions, and certain fields. In a 1970 study at the University of Pittsburgh, Carroll found that the most significant difference between white and black faculty members was in rank distribution. While white men were about 2.5 times more likely than white women to be in upper ranks, black men were 10 times more likely than black women to enjoy high rank (Carroll 1973, p. 175).

Spanish and Indian women constitute 30 and 38 percent, respectively, of all Spanish and Indian faculty, but their total numbers are very few. According to the 1970 Census, more than two-thirds of Spanish women faculty were teaching a foreign language (Kane 1976, p. IV-11). Minority women, like minority men, are frequently found teaching in ethnic-studies or basic-skills programs. Because these programs are found outside the traditional academic departments, they tend to be more temporary. Placement in such positions makes it more difficult for minority faculty, both men and women, to achieve promotion and tenure (Spurlock 1976, pp. 183-196).

Few minority women have written about their experiences as faculty members. Alperson concluded that participation in women's rights activities on campuses can often bring a painful sense of alienation to minority women, because white women are insensitive to the real differences that exist between the two groups. At the same time, minority women often become the targets of contempt on the part of their minority male colleagues, who regard them as a threat to their own social and economic advancement. In the Mexican-American culture, successful professional women are regarded as "macha," or masculine, and are ostracized for not deferring to the authority of the male (Alperson 1975, pp. 252-56).

Women Administrators

Information about women administrators is sparse. What little there is concerns the number of women occupying certain types of positions and their salaries. A complete assessment of the status of women administrators must await information about their particular assignments, the methods by which they obtained their positions, the length of time they have held them, and the factors that have influenced their success in obtaining positions and performance in them.

The most recent College and University Personnel Association salary survey (Van Alstyne and Withers 1977) has begun to collect some of this information, but analysis of the data is not yet available. The assessment problem is complicated by the lack of common definitions or position descriptions. The available studies were either based on different samples of administrative positions or used different definitions or titles. Further, information is also needed about women who have aspired to administrative positions but have not obtained them.

Every study reports the scarcity of women in administrative positions. The most recent study indicates that women occupy an average of 15.8 percent of the top 52 administrative positions in each of 1,100 responding institutions (Van Alstyne and Withers 1977, p. 15). White women were predominant, seven to one. Overall, white men held 79 percent of all the administrative positions; they held almost as large a share of the administrative positions in white coeducational colleges (83 percent) as they did in white male colleges (88 percent). By contrast, women held 52 percent of the administrative positions surveyed at women's colleges, a figure four times as great as the percentage of white women administrators in all institutions.

The 52 positions in the Van Alstyne study were grouped into five categories: administrative, academic, student, external affairs, and chief executives. In white coeducational institutions and men's colleges, white men held more than 96 percent of the chief-executive positions and 80 percent of the top-level positions in administrative affairs; women were clustered in positions in student and external affairs (Van Alstyne and Withers 1977, p. 9). Of the 2,926 institutions having chief executive officers, only 154 (less than 5 percent) are headed by women. Of these, 106 (or 69 percent) are in two- and four-year, church-related colleges (Taylor and Shavlik 1977, p. 93).

The only exceptions to the overwhelming presence of white males in the 52 positions surveyed at white coeducational institutions were in the positions of nursing dean, home-economics deans, and affirmative-action officer. The affirmative-action position was the only one with a sizable representation of all four race and sex groups for every type of institution. The clustering of women is exemplified by the fact that half of all the white women employed as administrators in white, public, coeducational institutions worked in only seven positions: head librarian, nursing dean, bookstore manager, registrar, student financial-aid director, home-economics dean, and information-office director. In other words, women administrators tend to be found in positions that reinforce feminine stereotypes about women's skills in student counseling and service-related occupations. Women

administrators are not typically found in academic administrative positions, such as deans or provosts, because faculty and department heads are traditionally recruited for these positions. For minority women, the same pattern applied: half are concentrated in only five positions (Van Alstyne and Withers 1977, pp. 9-10).

Little is known about trends in the hiring of women for administrative positions. A study by the National Association of State Universities and Land-Grant Colleges found that although women were still concentrated in low and middle administrative positions, 69 institutions reported an increase of women in administrative positions, from 649 in 1973, to 967 in 1975. The largest part of the increase occurred in low-level management. The researchers viewed this as encouraging, because they felt that higher-level administrators are chosen from this pool. Whether this conclusion is justified is difficult to assess at present, because of the lack of position descriptions in the survey and the lack of evidence that such upward movement will necessarily occur (*Chronicle of Higher Education*, March 1, 1976, p. 1).

To sum up, the status of women administrators is similar to that of women faculty with regard to numbers, rank, types of positions held, and compensation. It appears at present that women are moving in increasing numbers into faculty and administrative positions at the lower levels or ranks. They remain clustered, however, in certain types of positions. It is too soon to tell whether this increase will continue, whether these women will be promoted to top-level positions in the same proportion as their male counterparts, and whether women will become widely dispersed among disciplines and areas of administration.

Women in Educational Governance

Of the more than 47,000 trustees and regents serving on 2,314 governing boards responsible for 3,036 colleges and universities, only 15 percent are women. According to a survey for the Association of Governing Boards of Universities and Colleges, the typical trustee is a white male in his early fifties. Public institutions tend to include more women than do private institutions (Association of American Colleges, 20 June 1978, p. 4). At the national level, decisionmaking positions in both the Office of Education and the National Institute of Education tend to be held by men. In the Office of Education in 1974, 54 percent of the employees were women, but only 10 percent of the employees in GS grades 16 to 18 were women. The same pat-

tern was true for the National Institute of Education. While 59 percent of the employees were women, only 23 percent of the employees above GS-13 level were women (Fishel and Pottker 1974, p. 4).

Numerous studies (Robinson 1973b; Lieve 1973; Rossi 1970) show that though the percentage of women faculty has increased slowly from 1972 to the present, the production of women doctorates by discipline continues to far exceed the presence of women faculty within the discipline. Though women doctorates have a higher unemployment rate than men doctorates (Kane 1976, p. III-2), there is practically no information available about applicant flow in relationship to new hires, except for evaluative studies conducted within individual institutions.

Among the many reasons suggested for the discrepancy between the numbers of women completing doctorates and women being hired in faculty positions is that women's own preferences and choices about careers and lifestyles have created this pattern of employment (Venning 1977, p. 41). Others, both men and women, insist that institutional practices, rather than women's choices and preferences, are responsible for women's underrepresentation in faculty positions. They blame nepotism regulation, restrictions against hiring one's own graduates, the lack of tenurable part-time faculty positions, and conscious or unconscious bias of male faculty against their female colleagues, and they see little evidence of change in attitude among male faculty who control selection processes (Venning 1977, p. 41; and Chalmers 1972, p. 521). The reluctance of federal enforcing agencies to intervene in university affairs and vacillation on the part of administrators charged with overseeing departmental hiring are also seen as impediments to the hiring of women faculty (Clark 1977; Divine 1976).

The Hiring Process

Recruitment — The traditional "old-boy" system of recruiting faculty (and frequently administrators as well), in which a few colleagues in graduate departments at other institutions are asked to recommend someone for an opening, works to the disadvantage of women, even though it may not specifically exclude them. In a pervasively male system, men faculty are more likely to recommend men students, who tend to be their protegees (Berger and Foster 1977, Feldman 1975; Holmstrom and Holmstrom 1974; Tidball 1976). The advent of affirmative-action regulations has brought about in-

creased public announcement of job openings and much scrutiny of hiring procedures. Several studies have sought to determine what effect open advertising has had on faculty hiring; however, few substantive results have been reported. Silvestri and Kane placed four ads in the "positions wanted" section of the *Chronicle of Higher Education* for a white male, white female, black male, and black female, each with seven years' experience. In that same edition of the *Chronicle*, there were 140 relevant advertisements for vacant positions. But none of these advertising institutions wrote to the box numbers listed in the dummy advertisements. The investigators concluded that few of the institutions "appear eager or willing to expend the extra effort of contacting female and minority candidates, who are seeking positions" (Silvestri and Kane 1975, p. 448). However, an equally valid conclusion would be that self-advertising does not work. A finding of discrimination would only be justified if the response to dummy advertisements had clearly favored white males who were no better qualified. Other studies indicate that universities and colleges are still relying primarily on a network approach to recruitment, though it is often combined with open advertising (Marcus 1976, pp. 247-48). Affirmative-action hiring goals and timetables are causing these networks to be expanded in a search for qualified women and minorities.

In a study of department heads at the University of Massachusetts (where 50 percent of the faculty hires in the previous three years were women or minorities), Marcus found that department heads generally felt that networks rather than open advertising produced the most promising finalists. Two department heads noted that the network approach had located women who had been forgotten because they had been out of the field raising children; neither had responded to ads placed in professional journals (Marcus 1976, pp. 249-50). Marcus concluded that advertising in professional journals has been productive, but that the network approach remains the most effective method for recruiting women.

The Screening Process — Open to question by women seeking academic positions are the screening and selection processes, which use a system of peer review by department members. The results of the peer review are rarely questioned by administrators at high levels. The recent Carnegie study on affirmative action found that only about 30 percent of the affirmative-action plans of universities and 13 percent of the plans of colleges required any justification to a top-level administrator if the preferred candidate was a white male. In only a small number of institutions do affirmative-action plans state or

imply that otherwise equally qualified women and minority candidates could be considered additionally qualified by virtue of their sex or racial/ethnic group (Carnegie Council 1975, p. 81). Divine is particularly critical of a screening process that ranks outstanding candidates in order to focus attention on the selection of the "very best." He questions the validity of the assumption that all applicants can be accurately ranked according to merit. Skills relevant to successful university teaching are difficult to identify and are rarely described in terms sufficiently specific to permit anything but impressionistic and subjective evaluation. Some required criteria, such as the doctorate, are questionable as essential to adequate job performance. Furthermore, the ranking of the candidates is done independently by several evaluators, who may disagree about the relative importance of the criteria and to what degree a candidate possesses the required skills (Divine 1976, pp. 436-39). Divine concludes that "by placing so much emphasis on the subjective judgments necessary to rank candidates, and by stressing that the judgments at issue are so difficult that only a very few people are able to make them properly, the academy is effectively shielded behind a screen of inscrutability, which is not open to effective evaluation or control." Therefore, the ordinal model "facilitates the practice of discrimination in the name of academic freedom" and calls into question the legality of its use under Title VII (p. 439).

Antinepotism and Inbreeding Rules — Other institutional practices that have influenced the hiring of women are antinepotism regulations and rules against inbreeding (Foxley 1972, Pifer 1971). Antinepotism rules, while not originally designed to exclude women, in practice have been highly discriminatory to qualified women married to male faculty and administrators (Weissman et al. 1972; Rossi 1973). Though affirmative-action regulations prohibit antinepotism policies, Morlock and her associates reported the presence of unwritten policies in twice as many colleges and universities than had written ones (Morlock 1973, p. 265). While information on changes at a few specific institutions is available, there are no national data on the effectiveness of federal regulations in eliminating the negative impact of antinepotism rules on women. There is a similar lack of evidence about the effect of inbreeding policies. Some researchers have suggested that as women typically move where their spouses find employment, they are limited in their choice of institutions at which they can complete graduate work. Rules prohibiting the hiring of an institution's own graduates effectively limit the opportunities for such women for employment. Little is known about how widespread this

practice is, or the extent to which women have been affected (Graham 1970; Chalmers 1972).

The Dual-Career Couple — Those who suffer most acutely in the hiring process are dual-career couples, in which both the husband and the wife are qualified for and seek academic or administrative careers. Though uncommon in the past, the phenomenon of the dual-career couple is increasing with the corresponding increase in numbers of women with doctorates. A study by Berger and Foster (1977) of the job strategies pursued by dual-career couples indicates that they found it difficult to act against the societal standard that the careers of men are more important than the careers of women (p. 36). The researchers observed that the ways in which jobs are structured in terms of time and benefits are major barriers to full utilization of the dual-career faculty couple. A study of dual-career couples who engaged in commuting marriages to enable both partners to pursue their careers indicated that this arrangement is seldom viable (Gerstel 1977, pp. 350-67).

Compensation

The available data show that regardless of rank, type of institution, or discipline, women faculty are paid less than men (Bayer and Astin 1975, pp. 796-802). In 1975-76, the average salary for a faculty man was $17,312; for a faculty woman the figure was $14,242. In public universities, the figures were $18,638 and $14,458, respectively. When rank and type of institution are held constant, these differences persist. Male full professors received an average of $24,093; women only $21,497. In 1975-76, faculty received the largest pay increases in seven years, but male gains (6.3 percent) outstripped those of women (5.8 percent) (Freeman 1977, p. 180).

During the course of their professional careers, most women with doctorates fall steadily behind their male counterparts, both in income and faculty rank. Centra's study (1974) found that men Ph.D.'s were more likely than women to move into higher paid faculty ranks or administrative positions. They were more likely to get job offers from institutions with higher salary potentials and were freer to move from one campus to another to accept such offers. But even where faculty rank and experience were the same, they earned significantly more. Thus the sex differential in salary is largest for women who have been in the system longest (Bayer and Astin 1975, p. 800).

Salary differences between men and women faculty have not changed much over time. In 1970, women's average salaries were 70 percent that of men faculty. In 1960, they were 66 percent that of

Table 5. Dollar Amounts and Percentages by Which the Average Salaries of Male Faculty Exceed Those of Female Faculty, by Rank in All Postsecondary-Education Institutions

	1972-73[1]		1974-75[2]		1976-77[3]		1977-78[4]	
Rank	$ Diff.	% Diff.	$ Diff.	% Diff.	$ Diff.	% Diff.	$ Diff.	% Diff.
Professor	2,149	11.2	2,476	11.8	2,316	9.7	2,461	9.9
Associate Professor	724	5.0	884	5.5	792	4.4	890	4.7
Assistant Professor	728	6.4	634	4.7	681	4.6	623	4.0
Instructor and Lecturer	974	8.9	1,776	13.5	1,070	8.4	1,850	8.8
All Ranks	2,459	17.1	2,683	16.8	3,230	17.6	3,375	17.5

Sources:

[1]*Salaries and Tenure of Full-Time Instructional Faculty*, NCES data, cited by Roslyn D. Kane, *Sex Discrimination in Education: A Study of Employment Practices Affecting Professional Personnel* (Arlington, Virginia: ERIC Document Reproduction Service, ED 132 744, 1976), p. III-47.

[2]NCES data, cited in *Chronicle of Higher Education*, 10 February 1975, p. 1.

[3]U.S., Department of Health, Education, and Welfare, National Center for Education Statistics, *Salaries and Tenure of Full-Time Instructional Faculty in Institutions of Higher Education*, NCES 77-313 (Washington, D.C.: Government Printing Office, 1977), p. 60.

[4]U.S., Department of Health, Education, and Welfare, National Center for Education Statistics, "Memorandum on Selected Statistics on Salary and Tenure of Full-Time Instructional Faculty," 15 April 1978, p. 6.

men; in 1950, 71 percent; and in 1940, 70 percent (Kane 1976, p. III-14). As Table 5 shows, salary differentials persist across each rank and every type of institution, with a trend toward equalization only at the associate professor and assistant professor ranks. Because the percent differences remain generally the same, the dollar differences tend to increase over the years.

Variations in salary differences persist across disciplines as well. The greatest salary variations are in the physical and biological sciences, where men's salaries are greater than any prediction formula would forecast (Bayer and Astin 1975; Carnegie Council 1975; Darland 1974, cited in Kane 1975, p. III-19). Howe, Morlock, and Beck found an unbroken pattern of salary differences between men and women full-time faculty in English and modern-language departments. Women were paid salaries lower than men at the same ranks, in the departments, and in the same types of institution. The salaries of women were closer to those of men only when both sexes were primarily engaged in teaching (cited in Kane 1976, p. III-19).

Variables Affecting Salary — To analyze the reasons for salary differences, Darland (1974) undertook regression analyses on more than 25 predictor variables. His research revealed that length of time employed, administrative activity, and mobility increased men's salaries twice as much as women's. Time devoted to research and publishing books before reaching a mature age also resulted in higher reward for men. Darland also found that differences due to sex were much greater than those due to race, and that women were paid less than men in almost every combination of field and type of institution, regardless of race. Marital status and children had negative effects on women's salaries, and these differences were not attributable to the withdrawal of women from the labor force for childbearing. Darland's results were confirmed by Johnson and Stafford (cited in Kane 1976, pp. III-22-24).

The evidence points overwhelmingly to the conclusion that regardless of which variables are analyzed, or what reasons for differences are explored, women faculty are paid less than their equivalent male counterparts and that such salary differentials are traditional in higher education (Bayer and Astin 1975; Freeman 1977; Johnson and Stafford 1974).

Salaries of Administrators — Women administrators fare little better than their faculty counterparts. In analyzing data from the College and University Personnel Association survey of administrative salaries, Van Alstyne and Withers found that only 4 percent of white women and 2 percent of minority women held jobs in the top salary

quartile, but 47 percent of the white women and 56 percent of the minority women held positions in the bottom salary quartile. Women, both white and minority, were paid only about 80 percent of what men with the same job title were paid when employed by the same type of institution. Men employed at women's colleges were paid more than women holding the same job titles. Among affirmative-action officers, the only position in which all four sex and race groups were well represented, men were consistently paid more than women (Van Alstyne and Withers 1977, p. 11).

Approaches to Correcting Salary Discrepancies — Very little information is available about approaches being taken by institutions to correct salary discrepancies. Some institutional studies are available that describe problems and state how institutions have approached finding a solution. For example, on February 16, 1976, a federal judge found Montana State University guilty of discrimination in pay and promotion and ordered a negotiated settlement. The University, in cooperation with women faculty, worked out a master plan for corrective action, using a paired approach (Clark 1977, pp. 238-47). More information about what is happening at institutions is needed. Research that examines regression analysis and other methods for investigating salary differentials for sex bias and for correcting such salary differentials is badly needed for both faculty and administrators.

Koch and Chizmar (1976), in their study of faculty salaries at Illinois State University, concluded that

> There is almost no reliable public evidence concerning the ultimate effects of such programs upon faculty salary structures. It is unknown, for example, to what extent affirmative-action salary programs succeed in eliminating sex discrimination against female faculty. Further, the relationship between affirmative-action salary payments and measures of faculty status and performance such as academic rank, experience, and peer evaluations of productivity is a matter of speculation (p. 17).

Using regression techniques, they concluded that the affirmative-action program's method of salary analysis eliminated sex discrimination versus the typical female faculty member but introduced it for male faculty, because of a salary incremental process that was in excess of the amount necessary to eliminate the discrimination against women (pp. 22-23).

Promotion and Tenure

Little research has been done on the effect of promotional practices on women in higher education, or on the factors related to promotion. It is well established that women have been promoted to successive

ranks in academia more slowly than men. Centra, studying a sample of Ph.D. faculty, found that after five to six years of experience, just over half the men and 40 percent of the women were associate professors; after 13 or 14 years, slightly more than two-thirds of the men and 59 percent of the women were full professors. Only after 22 to 23 years did women reach parity in rank with men (cited in Kane 1976, p. III-3). Length of time between promotions is one of the factors that lead to striking differences in the distribution of women faculty by rank; women are 50 percent of the instructors, but only 9.7 percent of the full professors. Nor does information about promotion and tenure rates support the fear that unqualified women are invading tenure ranks. For example, a National Academy of Sciences study of the nearly 200 institutions with graduate programs in chemistry between 1971 and 1973 showed that the net gain in the number of women faculty at the full-professor level was one. At the associate-professor level, the net gain was seven. Since some 1,500 women had received Ph.D.'s in chemistry since 1960, it is questionable that only eight were qualified to become associate or full professors (Kane 1976, p. VII-9). This evidence poses many research questions. What are the factors that explain the slower rate of promotion for women? Is it persistence? Is it the ranks at which faculty are hired? To what extent do institutions go beyond academic backgrounds in their search for qualified women candidates? What happens to women doctorates in nonacademic jobs?

Promotion and Tenure Criteria and Procedures — High-level administrators are beginning to ponder difficult questions regarding compensation, promotion, and tenure criteria, and how these criteria can operate to the detriment of women. A former chancellor at the University of Kansas studied the issue. He observed:

> Most universities indicated that judgments about salary, promotion and tenure are based upon merit: in teaching, in research, and in service. In fact, considerable time and effort are devoted to the evaluation of these qualities of faculty performance, but the criteria employed are difficult to verbalize and virtually impossible to quantify.
>
> What teaching are we most likely to value — the teaching of a specialized doctoral level course which only a handful of colleagues can evaluate or comprehend, or the teaching of introductory courses to freshmen? What research activities are we most likely to reward — the "secondary effects of high frequency radiation on biphasic polymorphic endocrines," or "problems of achieving equal opportunities for women in higher education"? What services do we value most — secretary-treasurer of the regional or national professional association or service to the local community? In each instance the answer is likely to be the former rather than the latter. To what extent are these consistent with the attributes valued and encouraged for men? . . .

> . . . Stated in other terms, are criteria employed for decisions about salary, promotions, and tenure the optimum criteria for our society, or are they optimum for maintaining a predominance of men in higher education? . . . (Chalmers 1972, pp. 523-24).

Sex differentials in rate of promotion are the result of the countless decisions made by departments over time about new hires, work load, merit, and tenure. Yet review procedures on promotion to tenure or appointment to a tenured rank tend to be more extensive and often require approval at higher administrative levels than regular appointments at the lower ranks. The Carnegie Council on Policy Studies scrutinized promotion policies of 37 universities and 20 other institutions and found that affirmative-action and nondiscrimination policies had influenced promotion and tenure procedures and criteria in several ways. Sixty percent of the universities in the sample and 80 percent of other institutions provided for a periodic review of promotions by affirmative-action officers or committees. Twenty-two percent of universities and 10 percent of others provided for extension of time for tenure decisions for pregnant faculty members. One public research university had begun to place more emphasis on community service activities, recognizing that in the absence of adequate numbers, minority and women faculty were often called on to perform extra community services (Carnegie Council 1975, pp. 82-84).

Because women faculty are so few in certain disciplines, they are less likely to form a high proportion of the membership of committees whose decisions are important influences on promotion and tenure. Tidball's analysis (1976) of the American Council on Education's 1972 survey of teaching faculty led her to conclude that both men and women tend to support members of their own sex more readily. The overwhelming presence of men in higher education has produced an environment characterized by the prevalence of male attitudes. With the lack of women to serve on some departmental committees, these attitudes can pervade hiring, promotion, and tenure committees. Abramson's experience at the University of Hawaii led her to conclude:

> Peer judgment may be colored by petty jealousy, favoritism, fear of competition, political learnings, and other unlofty considerations. Knowledge of these abuses lies behind the distrust many women feel toward the system set up to judge their merit. In view of the persistence of the myths about women, such a system is bound to work to the detriment of women. In truth, many women would feel better about peer judgments if there were some indication that universities in general or

particular groups of scholars from each discipline knew how to articulate criteria of excellence (1975, p. 129).

The general lack of guidelines and specific criteria for promotion and tenure is a problem for both sexes, particularly in an era of retrenchment. However, when personalities and peer judgments supersede objective criteria, women can fare worse because there are fewer of them to serve on decisionmaking committees. Problems of promotion for women administrators are similar to those for women faculty. Frequently, competent women within the institution are overlooked in the search for outside candidates.

Women are also hampered by differences in teaching assignments. As Astin and Bayer found, women are more likely than men to carry heavy responsibility for undergraduate teaching. Nationally, less than half of the men faculty but more than two-thirds of the women indicated that their teaching was confined to undergraduates. These discrepancies were more marked in universities, where twice as many women as men taught only undergraduate courses. This teaching responsibility carried by women in universities is detrimental to their chances for promotion, because major promotion criteria are research and publications. Moreover, teaching loads are heavier for women. While both sexes tend to be responsible for the same number of students, 63 percent of the women compared with 49 percent of men taught nine or more hours per week (Astin and Bayer 1972, p. 103). The lack of objective, empirical methods for the evaluation of teaching performance impedes its use as an important promotion criterion.

Various reasons are advanced to explain why women publish less than their male counterparts. In addition to heavier teaching loads, women are less likely to be employed in universities where the bulk of the research is done and more likely to be concentrated in colleges that emphasize teaching (Astin and Bayer 1972, p. 103). Women Ph.D.'s in research institutions do not publish as often as men, because women are less likely to receive adequate support for their research. The likelihood that women will be assigned graduate students, for example, is less than that of men (Graham 1970, p. 1287). Fewer women are invited to serve as editors, write book reviews, or be members of professional panels or research teams (Mischel, cited in Kane 1976, p. VII-2). And although full-time faculty are expected to devote perhaps one-third of their time to research, no comparable provision is ordinarily made to the individual teaching part-time who is most often a woman. Therefore, the opportunity to attain a publication record equivalent to men is reduced. (Bunting et al., 1970, p. 388).

The Effect of Male Attitudes

Prevailing social sex-role stereotypes not only deeply affect women's attitudes toward themselves, but also influence men's attitudes toward women. There is some evidence that women are attacking their own concepts of sex-role stereotypes as their patterns of life and work change (Rossi 1965; Schlossberg 1974; Schetlin 1975; Liss 1975). However, because men have less reason to change, their attitudes are changing more slowly.

The small number of women in influential positions in most academic departments can reinforce men's views of women's allegedly limited potential for successful academic careers and for the ability to balance work and family demands. Some men faculty find it difficult to accept women faculty as colleagues. They may be unable to develop a strong platonic friendship with a woman, because they find it confusing to react to a person as both a coworker and a woman. Such attitudes constitute a continuing problem for women attempting to achieve professional goals. These attitudes can also deprive academic women of true collegial status and remove them from the debate, support, and interplay of ideas that lead to valuable associations and advancement in academic life (Kane 1976, pp. IX-19-20).

Tidball's study of teaching faculty, based on a 1972 American Council of Education survey, led her to conclude that most men faculty were relatively insensitive to issues that affect their women students and arouse their women colleagues. Among types of institutions, men faculty in women's colleges were found to be the most supportive of women on sex-related issues (1976, p. 377).

Tidball also found that the self-esteem of male faculty was more positive than that of women faculty. Both women and men faculty at all types of institutions felt more positively about themselves when comparing themselves with women than they did when comparing themselves to men. Women tended to compare themselves negatively against men in all types of institutions, though least so in the women's colleges. The more the institution is committed to research, and the less it is identified with teaching, the greater the climate of self-esteem for men faculty. For women, very different issues correlated with self-esteem. Feelings of success and self-esteem correlated strongly with an alliance to women-related issues, association with men faculty possessing a high degree of self-esteem, and teaching effectiveness. Feelings of success and self-esteem for women correlated only weakly with the research image of the institution (1976, pp. 381-83). Tidball concluded that women's perceptions of success and self-esteem do not correspond with those of men, who predominate in the aca-

demic environment and tend to control success factors such as promotion and tenure decisions, merit increases, and working assignments.

Womens' Patterns of Life and Work

The relationships among academic careers, marital status, and child rearing are being investigated more thoroughly, as more men and women find themselves in dual, and occasionally conflicting roles (Astin 1976b; Hamovitch and Morgenstern 1977; Powell and Reznikoff 1976). Women are entering the traditional family life-cycle and spending less time in it. They are postponing marriage and childbearing, and reducing family size. Increasing numbers of married women and mothers are in the labor force (Van Dusen and Sheldon 1976, p. 108). Van Dusen and Sheldon note:

> Although marital status and parental responsibilities are likely to become less salient in women's career choices, women will continue to bear the major responsibility for children, and it is their careers that will continue to be marked by the need to accommodate both parental and occupational roles (p. 114).

According to Freeman, women pay a higher price than their male counterparts to be accepted into the academic world, because in choosing to marry, in selecting a spouse, and in deciding whether to have children, they face a very different set of options and costs than do males (1977, p. 170).

Marital Status — Studying men and women faculty at high-quality research universities, Freeman found that almost all male faculty marry at some point in their lives, but one-third to one-half of female faculty never marry. The rate of marriage for women with doctorates is very low when compared with either men or women in general, or with male academics and women in similar professions. Of the women in the top-quality institutions studied by Freeman, 40 percent were single (as compared to 3 percent in the general population). That percentage rose to 55.6 percent for women faculty at prestigious institutions, such as the University of Wisconsin. On the other hand, only 8 percent of the male faculty had never married (1977, p. 170). For men, academic rank is strongly related to marital status, and being married is a great advantage. For women, however, being single is a relative advantage. Married women are not as likely to be promoted as single women, although married men are more likely to be promoted than single men (Freeman 1977, p. 171).

Child-Bearing and Rearing — The traditional child-bearing and child-rearing years, age 25-34, are also the years in which the pressure

involved in building an academic career is greatest. They generally are the years for completing doctoral work and doing the research and publication necessary to win tenure. It appears that these demands affect the child-bearing propensities of faculty women. They are much more likely than their male counterparts to have no children (46 percent) or fewer children (only 15 percent reported having three or more) (Freeman 1977, p. 173).

It has been suggested that because married women normally take on the primary responsibility for managing a household and rearing children, they simply are unable to produce professionally at the rate of their single female colleagues. However, Freeman (1977, p. 172) found no difference in the publication rates for married and single women. Married men, however, publish both articles and books at a higher rate than single men.

Another study, by Hamovitch and Morgenstern (1977), found no evidence of a diminution of scholarly productivity by women (as measured by numbers of articles and books published and peer evaluation) because of the presence of children in the household. Instead, the variables that were negatively related to number of articles published were found to be the number of hours of teaching responsibility and whether women faculty were teaching only undergraduates (p. 638). The authors suggest that academic women who rear children tend to be more professionally capable and highly motivated than those who do not (p. 644), and so are equally productive.

Single Women — While marriage creates obstacles for academic women, remaining single does not resolve sex-related professional problems. Men's attitudes and beliefs about single women are often contradictory and paradoxical. Some men consider single women fair game for exploitation; some assume single women are available for additional duties and difficult schedules; single women are often viewed as sex objects, regarded as unreliable, or presumed to be looking for a husband (Freeman 1977, p. 1972; Liss 1975, p. 219).

The Law

In the past decade, important changes have occurred in the laws and regulations that define the rights of women in education and employment. This chapter first describes these laws and regulations and then reviews their impact on higher education.

The Legal Framework

Constitutional Guarantees — Two types of constitutional guarantees provide equality for women: equal rights and equal protection. At present, various states are considering ratification of the Equal Rights Amendment to the Constitution. In its absence, the Fourteenth Amendment, which specifies that "no state shall . . . deny to any person within its jurisdiction the equal protection of the law," has been judicially applied to assure equal treatment of different social groups. Though a deep-seated belief in women's "separate place" has been often held by the traditionally all-white, male judiciary, in 1971 the California Supreme Court ruled that sex was indeed a social classification protected by the Fourteenth Amendment:

> Sex, like race and lineage, is an immutable trait, a status into which the class members are locked by the accident of birth. What differentiates sex from nonsuspect statutes, such as intelligence or physical disability, and aligns it with the recognized suspect classifications is that the characteristic frequently bears no relation to ability to perform or contribute to society. . . . The result is that the whole class is relegated to an inferior legal status without regard to the capabilities or characteristics of its individual members (*Sail'er Inn v. Kirby*, 5 Cal. 3d, 1971, cited in Kadzielski 1977, p. 186).

Legislation — The constitutional guarantees used by the judiciary to prevent discrimination have been buttressed by legislative initiatives. Federal legislation now provides for equality between the sexes in virtually every aspect of the employer-employee relationship and for students within federally assisted educational institutions (Picker 1976, p. 313). The major laws and regulations affecting higher education are:

- Titles VII and VIII of the Public Health Services Act, as Amended
- Title IX of the Education Amendments
- Title VII of the Civil Rights Act
- The Equal Pay Act
- Executive Order 11246, as Amended

A brief overview follows of the coverage of each of these as they affect the treatment of women as students and employees in higher-education institutions. Important supplements to them can be found in state laws, particularly those governing fair employment practices. However, though 42 states have such laws, they do not invariably apply to higher education (Carnegie Council 1975, p. 108).

- Titles VII and VIII of the Public Health Services Act, as Amended

By prohibiting discrimination on the basis of sex in the admissions of students to health training programs, this act was a precursor to Title IX of the Education Amendments.

- Title IX of the Education Amendments

This act covers admissions, treatment of students, and employment. However, private and public undergraduate institutions with a continuous policy of single-sex admissions are exempted from its admissions provisions. Institutions covered by the regulations must not, in their admissions policies and practices, rank applicants on the basis of sex; use quotas, tests, or other criteria that have a disproportionate effect on members of one sex; or provide differential treatment to students on the basis of sex because of their potential parental, marital, or family status (Malloy 1976, p. 743; U.S. DHEW OCR 1975a).

This act also protects students from discrimination on the basis of sex in all aspects of educational opportunity and student affairs. Though educational programs, extracurricular activities, and services provided to students are covered, curricular content is not. Educational programs include courses, opportunities for research, and occupational training. Prohibitions with regard to the treatment of students encompass aids, benefits, or services provided by the institution; differential rules of behavior, appearance or residence; and provision of assistance to any agency organization, or person that discriminates on the basis of sex.

The regulations regarding the treatment of students are specific in these areas:

Housing — Different quality, disproportionate quantity, and different rules, fees, or services for either sex are prohibited.

Comparable Facilities — Separate locker rooms, toilets, and showers must be comparable.

Access to Course Offerings — Separation of students according to sex in courses is prohibited except for musical choruses and physical-education classes involving bodily contact.

Counseling — Institutions cannot use different testing or other ma-

terials for each sex and are responsible for developing measures to ensure that the materials do not discriminate.

Financial Aid — Financial aid must be administered so that the overall effect of the awards, both those that are sex restricted and those that are not, is nondiscriminatory.

Athletics — Equal opportunity in athletics is to be provided to both sexes for intercollegiate, club, and intramural programs. Equal opportunity covers choice of sports; levels of competition; provision of equipment, supplies, travel allowances, housing facilities, publicity, coaches, academic tutoring, medical services, and training facilities; and scheduling of games and practices.

Other Provisions — Employment assistance and health and insurance benefits and services must be provided without discrimination on the basis of sex. Rules about marital and parental status cannot be differentially applied on the basis of sex. Pregnancy and related conditions cannot be used to exclude any students from educational programs, classes, and extracurricular activities (U.S. DHEW, OCR 1975a, pp. 214140-2; U.S. DHEW OCR 1975b; and Malloy 1976, p. 743).

The provisions of Title IX with regard to employment reinforce and supplement the nondiscrimination provisions already contained in the Equal Pay Act, Title VII, and Executive Order 11246. Under the regulations, institutions are required to conduct self-evaluations of their practices with regard to women students and employees, and to modify them and take remedial action where necessary. The primary impact of the Title IX regulations with regard to employment is to permit the Department of Health, Education, and Welfare (DHEW) to investigate discrimination on the basis of a financial relationship between the federal government and an institution, rather than on the basis of a complaint having been filed.

- Title VII of the Civil Rights Act

This act prohibits employment discrimination on the basis of race, color, national origin or ancestry, or sex. In 1972, the Equal Employment Opportunity Act extended its coverage to public and private higher-education institutions. Both employees and applicants for employment are included in the provisions of Title VII that cover hiring and firing; compensation; terms, conditions, or privileges of employment; and acts of retaliation against persons asserting their rights under Title VII. Women employees are covered by the general provisions of the Act and by the more specific "Guidelines on Discrimination Because of Sex" issued in 1972 by the Equal Employment Op-

portunity Commission (National Employment Law Project 1973, pp. 56-68). The Guidelines stipulate that protective legislation enacted by the states that prohibits women from engaging in certain activities or that requires differential benefits for women is superseded by the authority of federal law. They also prohibit the following employment practices:

- Labeling of jobs as men's or women's (with rare exceptions for *bona-fide* occupational qualifications)
- Separate lines of progression or seniority lists on the basis of sex
- Discriminatory practices based upon marital status, pregnancy, or principal-wage-earner status
- Discrimination between men and women with regard to fringe benefits

An example of a recently prohibited employment practice that potentially will greatly affect higher education was the recent Supreme Court decision, *Manhart v. Los Angeles* (98 S. Ct. 1370, 1978), that declared it unlawful under Title VII to require women to contribute more money to retirement funds than men because of sex-based actuarial tables. The effect of this ruling on the TIAA-CREF retirement programs, which make unequal pension payments to men and women, is under study (American Council on Education, 21 April 1978, pp. 3-4).

The Equal Employment Opportunity Commission (EEOC) has the authority to investigate complaints and bring civil actions against employers on behalf of aggrieved persons. During the period that the EEOC has enforced Title VII, courts have interpreted the law broadly to overcome discrimination. Many of these decisions affect college and university employment policies, particularly in the areas of recruitment testing, and other techniques of hiring; back pay; promotions; seniority systems; termination; and pregnancy and maternity leaves and benefits (Ducey 1974, p. 2 and Kane 1976, p. X-2).

- The Equal Pay Act

In a little-noted section of the Education Amendments of 1972, the Equal Pay Act was extended to cover executive, administrative, and professional employees (including faculty) within higher education institutions.

This act prohibits an employer from paying employees of one sex lower wages than those paid the opposite sex for equal work. Jobs are described in the statute in terms of the equality of the skill, effort, and responsibility required for performance and the similarity of the working conditions under which they are performed (U.S. Depart-

ment of Labor 1974, p. 13). In applying the law, three separate tests of equality are performed, all of which must be met for the equal pay standard to apply. In performing these tests, skill is defined in terms of the experience, training, education, and ability required for adequate performance in the job; effort in terms of the amount of physical or mental exertion; and responsibility in terms of the degree of accountability. Insubstantial differences in the degree or amount of skill, effort, or responsibility required for the performance of jobs does not render the equal pay standard inapplicable.

A major disadvantage to women of the Equal Pay Act is its limited coverage. Investigations of equal pay complaints are conducted only for matched pairs of opposite sexes in similar jobs. However, a major advantage is the expeditious nature of complaint processing. Ninety-five percent of the institutions found in violation of the act settle without going to court (Sandler 1973, p. 622).

- Executive Order 11246, as Amended

This Order and its implementing regulations cover employees only in institutions that hold federal contracts. It consists of a series of regulations that contractors agree to follow when they accept federal contracts in excess of $10,000. The Department of Labor is responsible for enforcement.

The Order embodies two central concepts: nondiscrimination and affirmative action (U.S. DHEW, OCR 1972, pp. 2-3). Nondiscrimination requires the elimination of all discriminatory conditions, whether purposeful or inadvertent. The university contractor must carefully and systematically examine all employment policies to be sure that they do not operate to the detriment of any employee. The contractor is also required to "establish in reasonable detail and make available upon request the standards and procedures which govern all employment practices in the operation of each organizational unit, including any tests in use and the criteria by which qualifications for appointment, retention, or promotion are judged" (U.S. DHEW, OCR 1972, p. 4).

Affirmative action, on the other hand, requires the contractor to do more than ensure employment neutrality. The institution must recruit, employ, and promote qualified members of groups formerly excluded: Caucasian women; and black, Spanish-surnamed, American Indian, and Oriental men and women. To meet the affirmative-action requirements, the federal contractor must:

(1) Issue a written equal-employment policy and affirmative-action commitment statement

(2) Appoint a top official to implement the program
(3) Publicize the program's existence to all the institution's constituencies
(4) Survey and analyze minority and female employment data to determine underutilization within job classifications and separate organizational units
(5) Set goals and timetables by unit and job classification to correct the underutilization
(6) Establish internal auditing and reporting procedures (Meckley and Anthony 1977, pp. 12-17).

The Federal Agencies' Enforcement of the Laws and Regulations

Currently, the EEOC enforces Title VII of the Civil Rights Act; the Wage and Hour Division of the Department of Labor enforces the Equal Pay Act until July 1979; the Department of Labor's Office of Contract Compliance enforces the Executive Order; and the Office for Civil Rights in DHEW enforces Title IX within colleges and universities. The Office for Civil Rights also has statutory responsibility for enforcing Title VI of the Civil Rights Act (which prohibits discrimination in federally assisted programs on the basis of race, color, and national origin) in 16,000 public school districts, 2,874 institutions of higher education, and 30,000 agencies involved in health and social services. Added to its responsibility for enforcement of Title VI in recent years have been the enforcement of Title IX and Section 504 of the Rehabilitation Act (which prohibits discrimination on the basis of handicap). Additionally, the Office for Civil Rights is responsible for enforcement of the Public Health Act in 1,500 institutions (Kadzielski 1977, p. 195).

Because of defects in organization, funding, and staffing and the difficulty of determining compliance with legal directives, the Office for Civil Rights and the Equal Employment Opportunity Commission have been unable to enforce the law adequately. The Office for Civil Rights has been under particularly heavy criticism from civil rights groups. The astronomical increase in Title IX complaints (from 14 in 1969 to 444 in 1974 filed by women in higher education institutions alone) has added to its burdens (Kadzielski 1977, p. 195). At present, 3,000 complaints filed with DHEW are awaiting action (Association of American Colleges, March 1978, p. 6).

Limited resources to meet its enforcement responsibilities do not completely explain the Office for Civil Rights' inaction during the period it was responsible for enforcing the Executive Order in addition to Title IX. The U.S. Civil Rights Commission declared that

the agency had tried to negotiate voluntary settlements over long periods of time rather than use its authority to cut funds and had, by its delay in issuing the Title IX regulations, "effectively nullified the intent of Congress in enacting Title IX" (Kadzielski 1977, pp. 194-95). Subsequently, unhappiness with the Office for Civil Rights led a coalition of 57 civil rights and women's groups to demand that the Secretary of HEW adopt "urgent measures" to redirect its efforts. A General Accounting Office (GAO) report found that because the Office for Civil Rights lacked basic management information, it could not readily ascertain for fiscal years 1970 through 1976 the number of complaints in each stage of the enforcement process, the number of complaints closed and on what basis, and the staff time expended on the average case. The GAO also found that this lack of information was not the direct result of insufficient resources, since between 1970 and 1976 the Office for Civil Rights had returned $8,931,000 of its appropriations to the Treasury (Association of American Colleges, June 1977, p. 1). Suits filed against DHEW by the Women's Equity Action League and others accused it of failing to enforce Title IX and Executive Order 11246.

Recent settlement of three major suits against DHEW could affect millions of women on campuses across the country. The settlement requires DHEW to establish a series of deadlines for handling individual complaints, to eliminate its backlog of complaints by 30 September 1979, and to ask Congress for funds for an additional 898 employees to investigate individual cases and initiate general compliance reviews of universities and school districts. This would double the present level of staff within the Office for Civil Rights (Association of American Colleges, March 1978, p. 6).

It remains to be seen what effect this settlement will have on the Office for Civil Rights, but recently the federal enforcement was reorganized to improve enforcement of all fair employment legislation. The reorganization, effective 5 May 1978, made the EEOC the principal federal agency in fair employment enforcement. Enforcement of the Equal Pay Act will be transferred from the Department of Labor to the EEOC in July 1979. This reorganization also removed from the Office for Civil Rights, DHEW, the responsibility for the Executive Order and returned this enforcement effort to the Department of Labor. The reorganization appears to be an effort to eliminate persistent complaints from campuses about the overlapping jurisdiction of federal enforcing agencies, though the deferral of federal processing of complaints until state and local agencies have completed their investigations is being continued.

Transfer of the responsibility for fair employment enforcement to the EEOC may not improve the status of women employees in colleges and universities. In July 1975, the backlog of unprocessed complaints filed with EEOC totaled 90,000; by December 1977, it had reached 140,000 (Stone 1978). However, a comprehensive reorganization of the Commission should greatly improve complaint processing and procedures for investigation of systemic discrimination. The three EEOC offices that have implemented a new, model program report substantial reduction of backlog and of time required to process cases (Norton 1977).

The status of women in colleges and universities still has its special problems. Since 1970, DHEW officials have been slow to respond to complaints and have often emphasized the letter rather than the spirit of the law. Within the enforcing agencies, those responsible for higher education institutions have been frequently uninformed about academic practices in hiring, promotion, and salary. Only a small proportion of these employees have been connected with higher education institutions. There have been excessive delays in the processing of compliance reviews and complaints and in the approval of affirmative action plans, which have involved institutions in litigation for periods of several years (Carnegie Council 1975, pp. 150-57). Furthermore, the belief that the penalties are disproportionate to the crime has made DHEW officials hesitant to impose sanctions. Sensing this, some university officials

> . . . have developed a repertoire of tactics (such as stalling and lobbying internally within HEW) to pressure enforcement agencies into backing down. While there seem to be individuals within the Office of [sic] Civil Rights dedicated to their task and sensitive to the problems of discrimination, the inadequate level of funding, personnel, and training, and the absence of understanding by many HEW officials themselves have raised serious questions in the minds of the affected university personnel concerning the intent or capability of HEW to enforce compliance. . . (Freeman 1977, pp. 182-83).

Whether the recent lawsuit settlement and reorganization of enforcement efforts will lead to improved enforcement of equal opportunity laws in colleges and universities remains to be seen. No university has actually suffered financially because of permanent or long-term suspension of funds (Freeman 1977, p. 183).

Court Cases

The courts have just begun to explore the variety of issues involved

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in sex discrimination in employment and education. (For example, the effect of the Bakke decision on the admission of women is not yet evident; and few Title IX cases have reached the courts.) According to Kane's analysis, the trend of decisions on the protection of women's rights have been positive, yet it is unclear how the Supreme Court will follow the patterns being established in key decisions by lower courts. The record of the Supreme Court on sex discrimination is mixed, with no clear philosophy yet emerging (Kane 1976, p. VI-1).

Case law affecting sex-discrimination issues has developed along two legal paths: the Fourteenth Amendment and Title VII of the Civil Rights Act. Under the Fourteenth Amendment, a major objective in sex-discrimination cases has been to achieve the designation of sex as a "suspect" classification, so that any governmental distinction based on sex would be subject to rigorous judicial review. For example, in *Cleveland Board of Education v. La Fleur* (94 S. Ct. 791, 1974), the Supreme Court struck down as violative of the Fourteenth Amendment policies that forced women employees to take leave at an arbitrary point during pregnancy. However, in *Geduldig v. Aiello* (94 S. Ct. 2485, 1974), also filed under the Fourteenth Amendment, the Supreme Court upheld a California disability-insurance program, even though health benefits for disabilities related to normal pregnancy were excluded (Kane 1976, pp. XI-2, 7). Later decisions by lower courts have interpreted the Geduldig case narrowly as a Fourteenth Amendment case that does not bind the courts on cases filed under Title VII, the other major legal path.

Title VII cases based on sex have been well received in the lower courts, but the Supreme Court has not been as favorable. The Supreme Court has overturned two lower-court decisions that held that failure to treat pregnancy in the same manner as any other temporary disability discriminate against women. *Wetzel v. Liberty Mutual Insurance Co.* (45 LW 3416, 1976) was denied on jurisdictional grounds, and *Gilbert v. General Electric* (45 LW 4031, 1976) was found by the Court not to be a violation of Title VII as a lower court had claimed.

Under Title VII cases, the courts have indicated that they will give great weight to statistics. In *Johnson v. The University of Pittsburgh* (5 FEP 1182, W. D. Pa., 1973), the plaintiff presented statistical evidence on the relative treatment of men and women faculty by the school to show that the department had not followed its own procedures in making a tenure decision. The court held that the statistics, in addition to the failure to follow procedures, created a *prima facie* case of discrimination. Similarly, in *Faro v. New York University* (8 FEP 319 [1973 USD NY] Affm. 8 FEP [609 2nd Cir.,

1974]), the case was decided against the plaintiff based almost completely on the lack of statistical evidence to support her claim that she was denied tenure because of sex discrimination (Kane 1976, p. VI-14). A review of existing cases involving employment qualifications indicates that the courts may be reluctant to probe too deeply into the ways universities choose their professors or award tenure unless there is strong evidence of sex discrimination.

Impact of Laws and Regulations on Women and Institutions of Higher Education

Unfortunately, there is little information available about the effect of federal laws on the status of women as students and employees in higher-education institutions. As individual complaints and cases have been filed and settled, the results have been reported in various newspapers, such as the *Chronicle of Higher Education*, and other media. Additionally, articles have appeared in higher education journals discussing innovative approaches taken by individual institutions to improve the status of women, and ERIC has gathered many self-study reports by institutions and women's groups. However, no studies have been conducted from a national perspective to assess the impact of the laws and regulations on the status of women within higher-education institutions. Such studies are urgently needed.

Though the legislation providing equal opportunity to women in higher education is so new that it is too early to tell what its ultimate impact will be, perhaps the greatest impact will be in the heightened awareness of both women and institutions. Women have organized to file complaints and suits and to collaborate with institutional administrators to effect necessary changes. Institutions have begun to change policies and practices that in the past have had a discriminatory impact on women. Some institutions have complied with the laws only minimally to avoid governmental pressure; others have voluntarily instituted reforms based on self-studies and a commitment to the spirit of the law. For example, a suit filed by five women faculty at Montana State University resulted in a comprehensive institutional self-study that led to major changes in faculty hiring and promotion procedures and the involvement of women in all aspects of faculty and personnel decisionmaking (Clark 1977, pp. 233-49).

Ultimately, the major impact of the legislation may be in the changes in the hearts and minds of the women and men who comprise the higher-education community. What Kadzielski has pointed out with regard to Title IX is true of all the recent legislation:

The public furor over Title IX and its regulations not only underlies some basic attitudinal conflicts within American society on sex roles and equality, but it also points out the basic inability of legislative and administrative efforts to effect meaningful social change. . . .

. . . Ironically, in the process of attempting to eliminate sex as a criterion for decision-making in this society we are forced to scrutinize it, and our feelings about it, more fully than ever before. If nothing else, Title IX at least raises the consciousness of all Americans to the point where response in one form or another becomes essential. But Title IX serves more than just this consciousness-raising function. It forces self-evaluation, planning, and the formulation of grievance mechanisms whereby complaints can be dealt with by educational institutions. And Title IX heightens the already raised political consciousness of women engaged in their quest for equality.

. . . women, like blacks before them, will now have to press on and fight to claim their rightful opportunities. . . . The fight will primarily be waged in classrooms . . . and academic administrative offices rather than in the courts or before federal agencies. . . (1977, p. 203).

Steps to Greater Equality: Recommendations for the Future

In the process of reviewing the research and informed opinions on the subject of women in higher education, the authors of this monograph inevitably drew some conclusions about how more equitable treatment can be fostered. The recommendations presented here are offered on our own responsibility out of constructive motives and in an optimistic spirit. They are intended to be examples of the many ways in which institutions could facilitate the attainment of women's educational and career goals. As such, these recommendations are intended to encourage administrators, faculty, staff, and students within institutions to examine the need for change, and to implement actions appropriate for their particular situations. The recommendations consist of five steps that can be taken to increase the participation of women in higher education: (1) expand the information base; (2) provide incentives for change; (3) eliminate institutional barriers; (4) provide new institutional services, and (5) continuously review progress and take necessary actions.

Step One: Expand the Information Base

Although awareness of the inequitable treatment of women in higher education has been growing, much remains to be done to ensure that attention continues to be focused on the status of women. Essential to this effort is information. Further research at national, regional, and state levels is needed, as is research within individual institutions on the effects of their policies, practices, and services on women.

Trends affecting the participation of women are an important area for future research. To assess trends, agreements must be reached about the types of data to be collected, how frequently they will be gathered, and by whom. In addition, Solmon (1976) recommends large-scale efforts to research individual experiences within institutions, such as applying for admissions, being admitted, and being processed for financial aid. He also recommends collecting information about departments within colleges and universities regarding their behavior toward women (p. 105). Such research could be very helpful to institutions examining their own policies and practices.

High-priority topics for research would include:

(1) Institutional policies, practices, and services that are effective in achieving a more equitable environment for women (to be studied in large-scale national surveys)

(2) Characteristics of institutions that have a higher than average percentage of women students and faculty

(3) Factors related to differential participation by the sexes in specific disciplines

(4) Factors related to educational levels to which women aspire

(5) Numbers, characteristics, and problems of minority women students and faculty

(6) The numbers and characteristics of women students who do not apply, enroll, or participate in higher education compared to men students who do not

(7) Attrition rates for women students and their reasons for dropping out compared to those for men students

(8) The effect of counseling techniques on women

(9) Career goals, positions held, achievements, and failures of women faculty and administrators

(10) Attitudes of male faculty and administrators toward women students, faculty, and administrators

The authors recognize that Title IX regulations require institutional self-study, and they recommend that institutions view such requirements as an opportunity rather than a burden. Self-studies can act as a catalyst in effecting institutional change. Support for change will be more readily achieved if it is based on analysis of the daily operation of each unit of an institution, and if those most affected by change (administrators, faculty, staff, students, and women's groups) are included in the self-study process. Topics for institutional self-study would include those listed above, as well as the effects of their particular policies, practices, and services on women.

Institutional self-study and research about women are not themselves sufficient to make people aware of problems. Self-study results need to be widely disseminated and discussed throughout the institution. A national dissemination network could create a flow of information throughout the higher-education community about attempted programs, and failures, and would facilitate institutional change.

Step Two: Provide Incentives for Change

Regardless of the amount of information available, few changes will occur without appropriate incentives. Incentives can be institutional, departmental, or individual.

A major incentive for institutions has been legislation requiring equality of opportunity for women in employment and in federally assisted educational programs. Many institutions have taken the necessary steps to adhere to the spirit of the law, either from their own moral commitment to equity or from fear of external standards imposed by the federal government or lengthy litigation. According to Rumbarger,

> . . . institutional reform and the elimination of discrimination cannot be accomplished simply through the imposition of external requirements by governmental agencies. . . . If change does not come from within the institution itself, and if proposed reforms are not supported by the internal structures and resources of the university community, remedies imposed by external agencies will be superficial and will fail to reach the roots of discriminaton against women (cited in Solmon 1976, p. 36).

Collaboration between institutional administrators and women who have organized to improve the status of women and the presence of women on governing boards constitute other incentives for institutional change.

At the departmental level, incentives could be provided by public recognition of accomplishments and by more tangible rewards, such as the allocation of additional positions or funds. The authors recommend recognizing and rewarding departments that make unusual efforts to recruit women students in disciplines from which they have been traditionally excluded, and to award graduate research assistantships to women. Departments can also expand their recruitment activities and make other efforts to hire additional qualified women; take the initiative to review and, where necessary, equalize compensation; and provide an environment conducive to the professional growth of women faculty. Such departments can be recognized as models by their college or central administrations and be appropriately rewarded.

Individuals can be motivated to improve the status of women through encouraging and rewarding new ideas and through public recognition of their accomplishments. Individual motivation and reward can also come from the personal satisfaction derived from mentor relationships in which the mentors can see the positive effects of their influence. More tangible incentives can be created by making contributions toward equity a criterion for merit increases and promotion. Individual motivation will also increase as more persons realize that changes made to improve the status of women benefit everyone. Finally, successful female role models can have a long-term

impact on the aspirations of women and the attitudes of male colleagues.

Step Three: Eliminate Institutional Barriers

Barriers are institutional policies, practices, rules, or regulations that impede or constrain women's access to and participation in higher education. Such inadvertent barriers can be discovered through self-studies and eliminated.

Examples of common barriers for students have been admissions quotas or different criteria for men and women, lack of access to sufficient financial aid, limitations in credit-transfer policies, and inflexible departmental requirements for residency and degree completion. Barriers can have a particularly discouraging impact on the reentry woman student who frequently needs flexibility in meeting educational requirements. As Lewis observed, it is inconceivable

> . . . that colleges would put roadblocks in the way of the older woman who wants to return to school, but this is in fact what most of them do. Among the handicaps which the older woman faces is the loss of undergraduate credits which were obtained too long ago, the scheduling of classes at times which conflict with family responsibilities, and age limits in many graduate and professional programs. Perhaps these problems cannot be entirely eliminated, but few schools have made a serious effort to minimize them and to give the returning housewife a break (cited in Solmon 1976, p. 30).

Admissions practices should be scrutinized, and any informal quotas that remain eliminated. Though the evidence is conflicting concerning differential treatment in the awarding of financial aid, any discrimination that exists in both federally financed programs and private scholarship donations should be eliminated. Departments, particularly those in nontraditional fields for women should closely examine their procedures and criteria for the awarding of graduate research assistantships. Monitoring applicant flow, acceptances, and awards of assistantships by sex will help departments to take corrective action as needed.

Institutional policies and practices can also create barriers to equity in the hiring and retention of women faculty and administrators. Examples of potential barriers in the hiring process are antinepotism and inbreeding rules, which should be replaced by criteria more applicable to adequate job performance. The screening processes within academic departments can also serve as barriers. The probability of women being hired in faculty positions would be increased if women were appointed to screening committees, sex were included as one of

many criteria for selection, and numerical ranking procedures to arrive at "the best qualified" candidate were eliminated (and, instead, a pool of fully qualified candidates were interviewed). In an era in which opportunities to hire faculty and administrators may be few, the urgency to hire women is obvious. Tokenism must not be mistaken for genuine progress.

To achieve equitable compensation at all ranks for men and women faculty, validated methods for examining faculty compensation practices and for equalizing salaries should be developed. Other barriers in the employment of women faculty can be found in the informal practices within academic departments according to which women are treated differently or excluded from full participation in departmental activities. Such barriers can be eliminated, and important professional experience gained, by the appointment of women to faculty senates or other governing committees, and by examination of the relationship between tenure and promotion criteria and the teaching or research assignments given individual faculty.

Step Four: Provide New Institutional Services

Institutional self-study should not only reveal barriers to equity for women but also suggest the need for additional services. Numerous services that would benefit women were extensively discussed in the literature surveyed: examples are provided below.

Probably the most important service that institutions could provide for women students and employees is child care (which is at least as important as the lounges, athletic facilities, and parking lots that most institutions already provide). Numerous researchers have repeatedly cited the need for this essential service.

Another important service, particularly for reentry women students, is counseling. To meet the changing aspirations and expectations of women students in an era of transition, counselors should develop an integrated approach to academic and career counseling at the high school, undergraduate, and graduate levels. They should coordinate their efforts with parents, student-services personnel, and faculty. A counselor-faculty team approach to certain aspects of curriculum development and outreach counseling programs that would change faculty and administrative attitudes about women students are some of the new directions counseling could take.

Women's centers and women's programs, in which women can share experiences and build networks, can provide supportive environments in coeducational institutions for women students, faculty, and administrators isolated in traditionally male disciplines or positions.

These centers and programs are recommended until there are sufficient women throughout academic departments and administrative positions to serve as positive role models.

Examples of other services that would facilitate the entrance and retention of women as students are flexibility in admissions criteria, development of recruitment programs to attract women to traditionally masculine disciplines, and exemplary career-guidance programs. Such activities would help eliminate the clustering of women in certain fields. Flexibility in the awarding of credit for nonclassroom learning and the provision of financial aid for part-time study would greatly benefit reentry women students. However, providing ample financial assistance for part-time study would require changes in federal policy for federal student-assistance programs. Expansion of the health services provided women, scheduling of classes in conveniently located facilities for commuting women students, and the provision of adequate campus security are other important services that would help meet the particular needs of women.

Regarding the hiring of faculty and administrators, the authors recommend expansion of the traditional networks used to recruit qualified women applicants, particularly those in the surrounding geographical area and those already employed in nonacademic occupations. Departments can also encourage, rather than discourage, the hiring of dual-career faculty couples.

A variety of support systems can be developed to accommodate married women (and men) with children. According to Flanders, "although many academics have successfully balanced home responsibilities with full time careers, for others the personal conflict and strain on the family brought about by this balancing act have been formidable" (1976, p. 50). Flanders and others recommend part-time, tenurable appointments that have salaries, promotion opportunities, and responsibilities comparable to those accompanying full-time appointments. Flexibility can also be provided to women and men with family responsibilities through leaves of absence for child-rearing and emergencies, through appointments that allow movement from part-time to full-time status and back again, through schedule adjustments, and through delays in tenure decisions for women whose careers are interrupted by pregnancies.

The hiring of women administrators for decisionmaking positions can have a major impact on the status of women throughout an institution. Appropriate training should be provided women faculty and lower-level administrators who are promoted to executive positions. Specialized training for women administrators, provided ex-

ternally or internally, may be necessary because of their past limited representation in disciplines associated with management and their exclusion from the "old-boys' clubs" where much informal training occurs.

Step Five: Continuously Review Progress and Take Necessary Actions

Our laws and courts have affirmed the commitment of our society to equity. However, this moral commitment is only the beginning of the social change that will come more slowly. All of the previous recommendations for steps to greater equality will facilitate change only if a *continuing* effort is made. Administrators and educational leaders committed to long-term efforts are essential. The initiation of new ideas and practices is often easier than their maintenance, or the maintenance of a continued impetus for change. Most important is a commitment to equity on the part of faculty who, through their teaching, shape the values and behaviors of their students.

Equity is an ideal realized through the actions of individuals. Institutional equity can be realized through actions, taken by individual men and women, that permit and encourage women to accomplish their educational and career goals. As women and men act together to achieve a more equitable environment for women, and as their actions are recognized and rewarded, others will be encouraged to act as well. Ultimately, it will be our society itself that will most benefit from the achievement of equitable opportunity in higher education, regardless of sex.

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